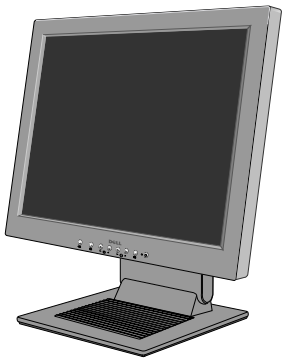
COLOR MONITOR
SERVICE MANUAL

CHASSIS NO. : CL-29
FACTORY MODEL: LD803H
MODEL: 1800FP

CAUTION
BEFORE SERVICING THE UNIT,
READ THE **SAFETY PRECAUTIONS** IN THIS MANUAL.



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SPECIFICATIONS

1. LCD CHARACTERISTICS

Type	: TFT SXGA LCD
Size	: 18.1inch
Pixel Pitch	: 0.2805(H) x 0.2805(V)
Color Depth	: 8-bit, 16,777,216 colors
Electrical Interface	: LVDS
Surface Treatment	: Anti-Glare, Hard Coating(3H)
Operating Mode	: Normally Black
Backlight Unit	: 6-CCFL (Cold Cathode Fluorescent Lamp)

2. OPTICAL CHARACTERISTICS

2-1. Viewing Angle by Contrast Ratio ≥ 10

Left : -60° min., -80°(Typ)
Right : +60° min., +80°(Typ)
Top : +60° min., +80°(Typ)
Bottom : -60° min., -80°(Typ)

2-2. Luminance : 200(min), 250(Typ)

2-3. Contrast Ratio : 200(min), 350(Typ)

3. SIGNAL (Refer to the Timing Chart)

3-1. Sync Signal

• Type : Separate, Positive/Negative
Composite, SOG (Sync On Green)
Digital

3-2. Video Input Signal

1) Type	: R, G, B Analog
2) Voltage Level	: 0~0.70 V
a) Black	: 0.0 Vp-p
b) 128 Gray	: 0.35 Vp-p
c) Full White	: 0.70 Vp-p
3) Input Impedance	: 75 Ω

3-3. Operating Frequency

Horizontal	: 30 ~ 80kHz
Vertical	: 56 ~ 85Hz

4. POWER SUPPLY

4-1. Power Adaptor(Built-in Power)
Input : AC 100~240V, 50/60Hz , 1.0A

4-2. Power Consumption

MODE	H/V SYNC	VIDEO	POWER CONSUMPTION	LED COLOR
POWER ON (NORMAL)	ON/ON	ACTIVE	less than 53 W	GREEN
STAND-BY	OFF/ON	OFF	less than 3 W	AMBER
SUSPEND	ON/OFF	OFF	less than 3 W	AMBER
DPM OFF	OFF/OFF	OFF	less than 3 W	AMBER
POWER SW OFF	-	-	less than 1 W (at 120V)	OFF

5. ENVIRONMENT

5-1. Operating Temperature: 10°C~35°C (50°F~95°F) (Ambient)
5-2. Relative Humidity : 10%~80% (Non-condensing)
5-3. MTBF : 50,000 Hours(Min)

6. DIMENSIONS (with TILT/SWIVEL)

Width	: 406 mm (15.98")
Depth	: 223 mm (8.78')
Height	: 431 mm (16.97")

7. WEIGHT (with TILT/SWIVEL)

Net. Weight	: 7.8kg (17.19 lbs)
Gross Weight	: 9.5kg (20.94 lbs)

PRECAUTION

WARNING FOR THE SAFETY-RELATED COMPONENT.

- There are some special components used in LCD monitor that are important for safety. ***These parts are marked ⚠on the schematic diagram and the replacement parts list.*** It is essential that these critical parts should be replaced with the manufacturer's specified parts to prevent electric shock, fire or other hazard.
- Do not modify original design without obtaining written permission from manufacturer or you will void the original parts and labor guarantee.

TAKE CARE DURING HANDLING THE LCD MODULE WITH BACKLIGHT UNIT.

- Must mount the module using mounting holes arranged in four corners.
- Do not press on the panel, edge of the frame strongly or electric shock as this will result in damage to the screen.
- Do not scratch or press on the panel with any sharp objects, such as pencil or pen as this may result in damage to the panel.
- Protect the module from the ESD as it may damage the electronic circuit (C-MOS).
- Make certain that treatment person's body are grounded through wrist band.
- Do not leave the module in high temperature and in areas of high humidity for a long time.
- The module not be exposed to the direct sunlight.
- Avoid contact with water as it may a short circuit within the module.
- If the surface of panel become dirty, please wipe it off with a softmaterial. (Cleaning with a dirty or rough cloth may damage the panel.)

⚠ CAUTION

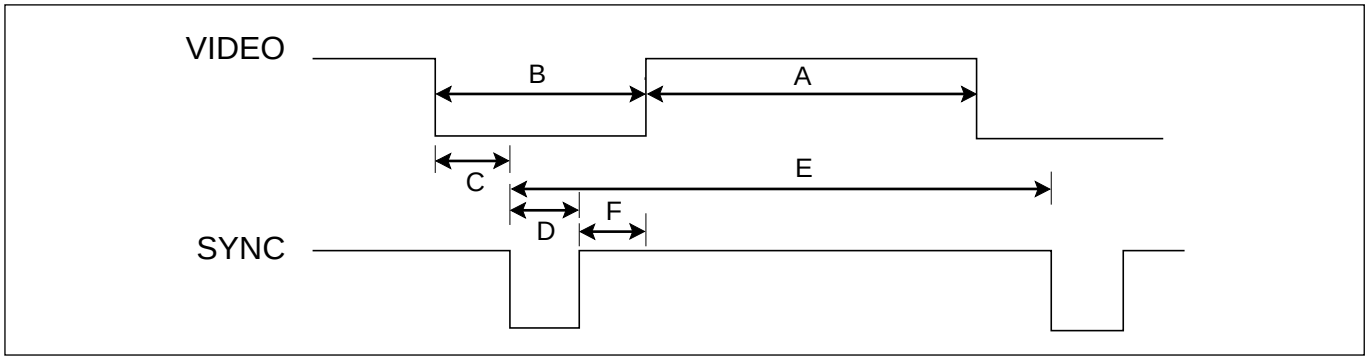
Please use only a plastic screwdriver to protect yourself from shock hazard during service operation.

⚠ WARNING

BE CAREFUL ELECTRIC SHOCK !

- If you want to replace with the new backlight (CCFL) or inverter circuit, must disconnect the AC adapter because high voltage appears at inverter circuit about 650Vrms.
- Handle with care wires or connectors of the inverter circuit. If the wires are pressed cause short and may burn or take fire.

TIMING CHART



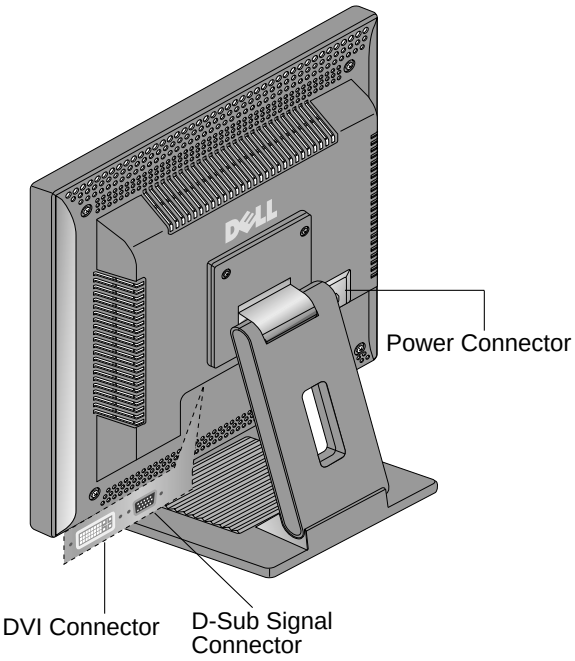
<< Dot Clock **(MHz),** Horizontal Frequency **(kHz)**, Vertical Frequency **(Hz)**, Horizontal etc... **(µs)**, Vertical etc... **(ms) >>**

Mode	H/V Sort	Sync Polarity	Dot Clock	Frequency	Total Period (E)	Video Active Time (A)	Front Porch (C)	Sync Duration (D)	Back Porch (F)	Resolution
1	H	+	25.175	31.469	800	640	16	96	48	**640x350 70Hz**
	V	–		70.09	449	350	37	2	60	
2	H	–	28.321	31.468	900	720	18	108	54	**720x400 70Hz**
	V	+		70.08	449	400	12	2	35	
3	H	–	25.175	31.469	840	640	16	96	48	**640x480 60Hz**
	V	–		59.94	525	480	10	2	33	
4	H	–	31.5	37.5	840	640	16	64	120	**640x480 75Hz**
	V	–		75	500	480	1	3	16	
5	H	–	36.0	43.269	832	640	56	56	80	**640x480 85Hz**
	V	–		85.0	509	480	1	3	25	
6	H	+	40.0	37.879	1056	800	40	128	88	**800x600 60Hz**
	V	+		60.317	628	600	1	4	23	
7	H	+	49.5	46.875	1056	800	16	80	160	**800x600 75Hz**
	V	+		75.0	625	600	1	3	21	
8	H	+	56.25	53.674	1048	800	32	64	152	**800x600 85Hz**
	V	+		85.061	631	600	1	3	27	
9	H	+/–	57.283	49.725	1152	832	32	64	224	**832x624 75Hz**
	V	+/–		74.55	667	624	1	3	39	
10	H	–	65.0	48.363	1344	1024	24	136	160	**1024x768 60Hz**
	V	–		60.0	806	768	3	6	29	
11	H	–	78.75	60.123	1312	1024	16	96	176	**1024x768 75Hz**
	V	–		75.029	800	768	1	3	28	
12	H	+	94.5	68.677	1376	1024	48	96	208	**1024x768 85Hz**
	V	+		84.997	808	768	1	3	36	
13	H	+/–	108.0	67.500	1600	1152	64	128	256	**1152x864 75Hz**
	V	+/–		75.000	900	864	1	3	32	
14	H	+/–	92.978	61.805	1504	1125	18	134	200	**1152x900 65Hz**
	V	+/–		65.96	937	900	2	4	31	
15	H	+	108.0	63.981	1688	1280	48	112	248	**1280x1024 60Hz**
	V	+		60.02	1066	1024	1	3	38	
16	H	+	135.0	79.976	1688	1280	16	144	248	**1280x1024 75Hz**
	V	+		75.035	1066	1024	1	3	38	

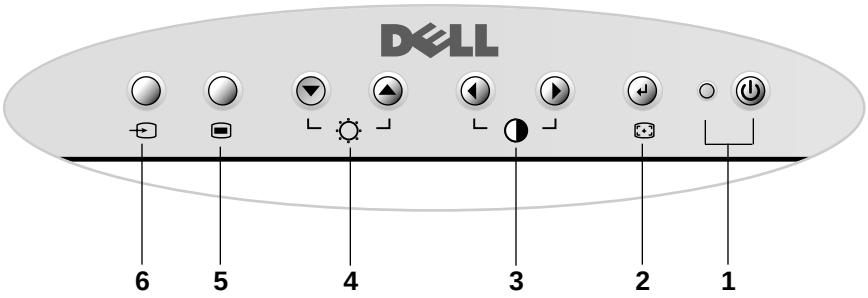
OPERATING INSTRUCTIONS

FRONT VIEW

REAR VIEW



Front Control Panel



1. **Power Button and LED Indicator**
   Turn the display on/off and indicate the status of power management.

2. **Select/Auto Button**
   Use this button to enter a selection in the On Screen Display. Automatically adjust vertical position, horizontal position, pixel clock and phase.

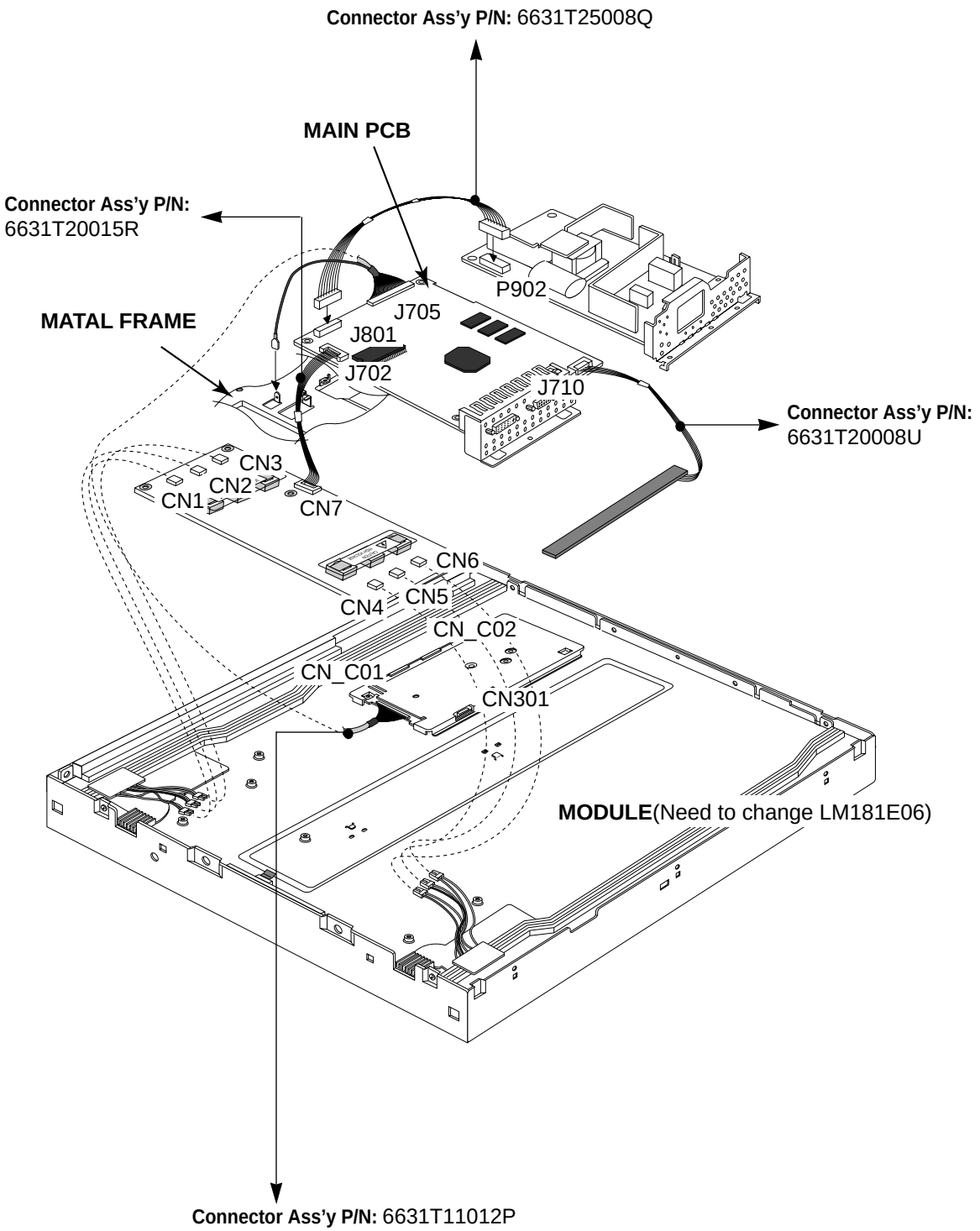
3. **Left/Right arrow Buttons**
   Use these buttons to choose or adjust items in the On Screen Display and activates Hot Key function for contrast adjustment.

4. **Up/Down arrow Buttons**
   Select between OSD items and activates “Hot key” function for brightness adjustment.

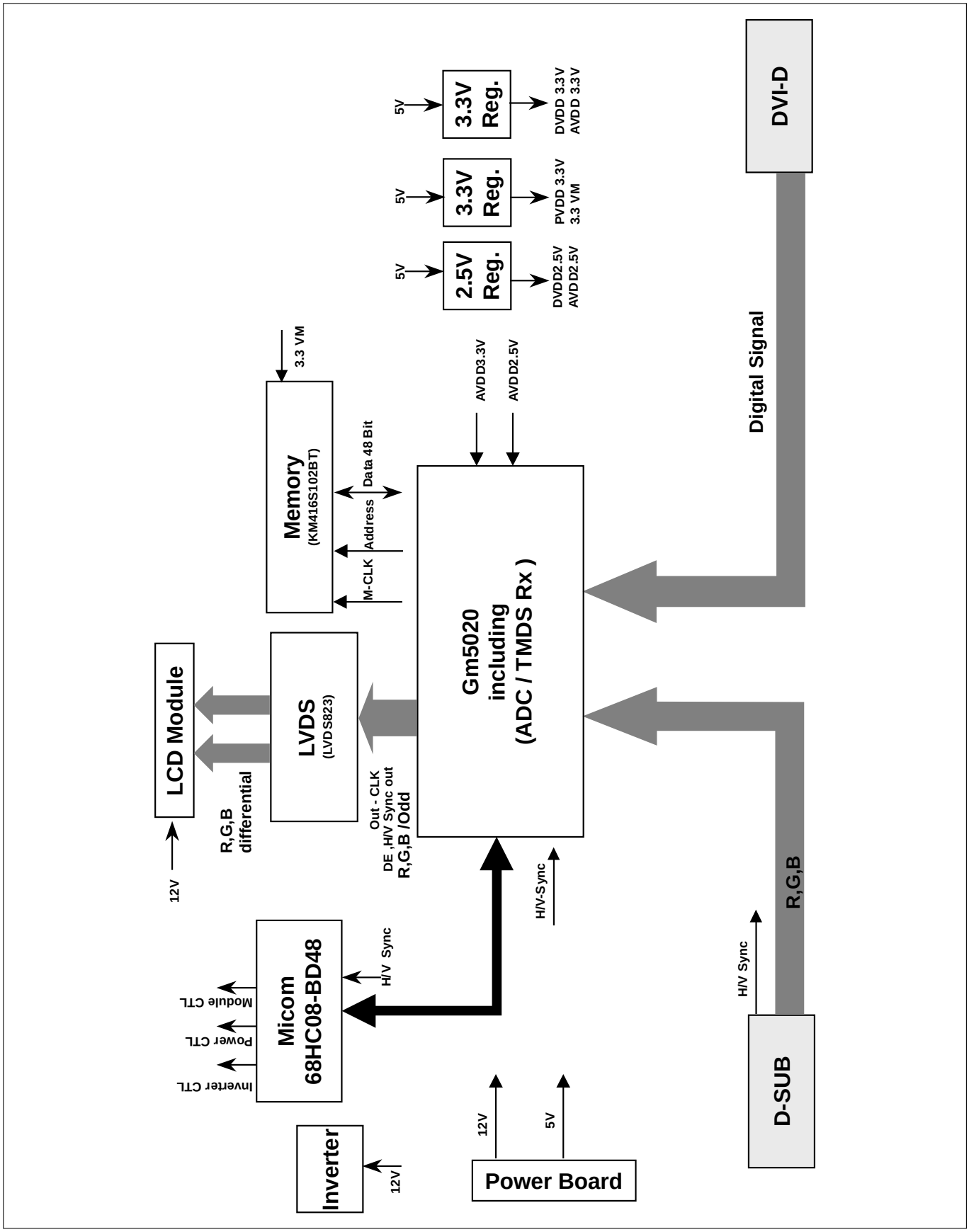
5. **Menu Button**
   Use this button to enter or exit the On Screen Display.

6. **Input Selection Button**
   Use this button to make D-sub or DVI connector active.
   This feature is used when two computers are connected to the display. The default setting is D-sub.

WIRING DIAGRAM



BLOCK DIAGRAM



DESCRIPTION OF BLOCK DIAGRAM

1. Video Controller Part.

This part amplifies the level of video signal for the digital conversion and converts from the analog video signal to the digital video signal using a pixel clock.
The pixel clock for each mode is generated by the PLL.
The range of the pixel clock is from 25MHz to 135MHz.
This part consists of the Scaler and frame buffers which converts frame rate of input signal to 60Hz frame rate.
The Scaler gets the video signal converted analog to digital, interpolates input to 1280 X 1024 resolution signal and outputs 8-bit R, G, B signal to transmitter.
Especially pre-amp / ADC / Video controller are merged to one chip 'Gm5020' by Genesis. Also FRC is separate.

2. Display Data Transmitter Part.

This part transmit digital signal from the Scaler to the receiver of module.

3. Power Part.

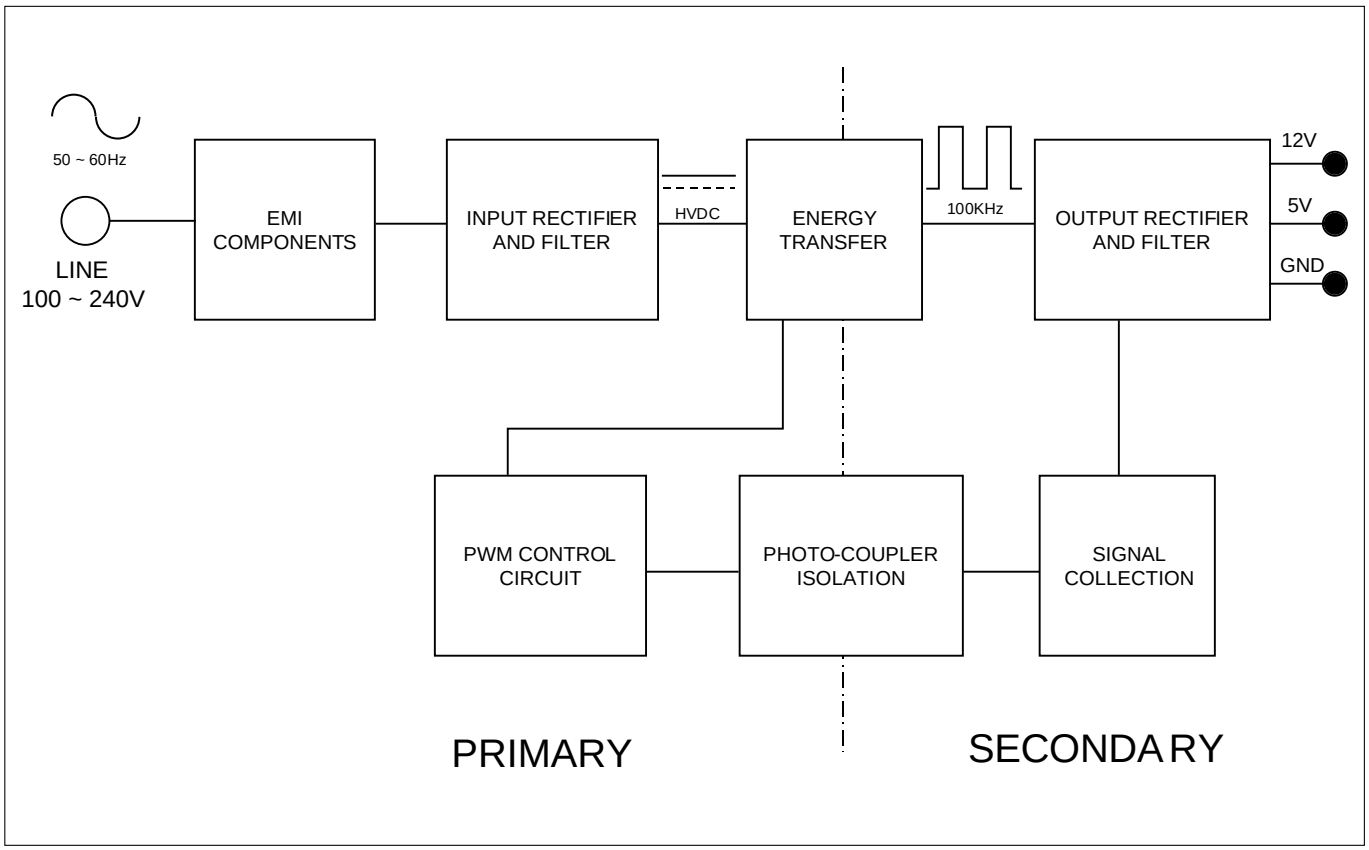
This part consists of the one 5V, two 3.3V and one 2.5 regulators to convert power which is provided 12V, 5V in Power Board.
12V is provided for inverter, 5V is provided for Micom and LCD Panel.
Also, 5V is converted 3.3V and 2.5V by regulator. Converted power is provided for IC in the main board.

4. MICOM Part.

This part consists of EEPROM IC which stores control data, Reset IC and the Micom.
The Micom distinguishes polarity and frequency of the H/V sync are supplied from signal cable.
The controlled data of each modes is stored in EEPROM.

5. Inverter

The inverter converts from DC12V to AC 700V and operate back-light lamp of module.



Operation description_Power

1. EMI components.

This part contains of EMI components to comply with global marketing EMI standards like FCC, VCCI CISPR, the circuit included a line-filter, across line capacitor and of course the primary protection fuse.

2. Input rectifier and filter.

This part function is for transfer the input AC voltage to a DC voltage through a bridge rectifier and a bulk capacitor.

3. Energy Transfer.

This part function is transfer the primary energy to secondary through a power transformer.

4. Output rectifier and filter.

This part function is to make a pulse width modulation control and to provide the driver signal to power switch, to adjust the duty cycle during different AC input and output loading condition to achive the dc output stablize, and also the over power protection is also monitor by this part.

5. Photo-Coupler isolation.

This part function is to feed back the dc output changing status through a photo transistor to primary controller to achive the stablized dc output voltage.

6. Signal collection.

This part function is to collect the any change from the dc output and feed back to the primary through photo transistor

ADJUSTMENT

All adjustment are thoroughly checked and corrected when the monitor leaves the factory, but sometimes several minor adjustment may be required.
Adjustment should be following procedure and after warming up for a minimum of 10 minutes.

• Alignment appliances and tools.
- IBM compatible PC
- Programmable Signal Generator.
  (eg. VG-819 made by Astrodesign Co.)
- E(E)PROM with each mode data saved.

1. Adjustment Start
1) Display any pattern at any Mode.
2) Run alignment program for LD803H on the IBM compatible PC.
3) Select EEPROM → ALL INIT command and Enter.
4) This will make all data to default state.
5) Select COMMAND → PRESET START command and Enter.

2. Adjustment for White Balance
1) Display Black pattern at SXGA/60Hz.
2) Set External Bright to MAX position and Contrast to MAX Position.
3) Select PRESET START → BIAS CAL command and Enter.
4) No attempt to manually adjust, BIAS data is automatically adjusted and saved to the EEPROM.
5) Display Full White pattern at SXGA/60Hz.
6) Select DRIVE CAL command and Enter.
7) 9300K are automatically adjusted and saved to the EEPROM.
8) Select PRESET EXIT command and Enter.

3. Adjustment for EDID
1) Use this procedure only when there is some probelm on EDID data.
2) Connect the D-sub cable.
3) Select EEPROM → EDID(A) WR command and Enter.
4) DVI to D-sub cable.
5) Select EEPROM → EDID(D) WR command and Enter.

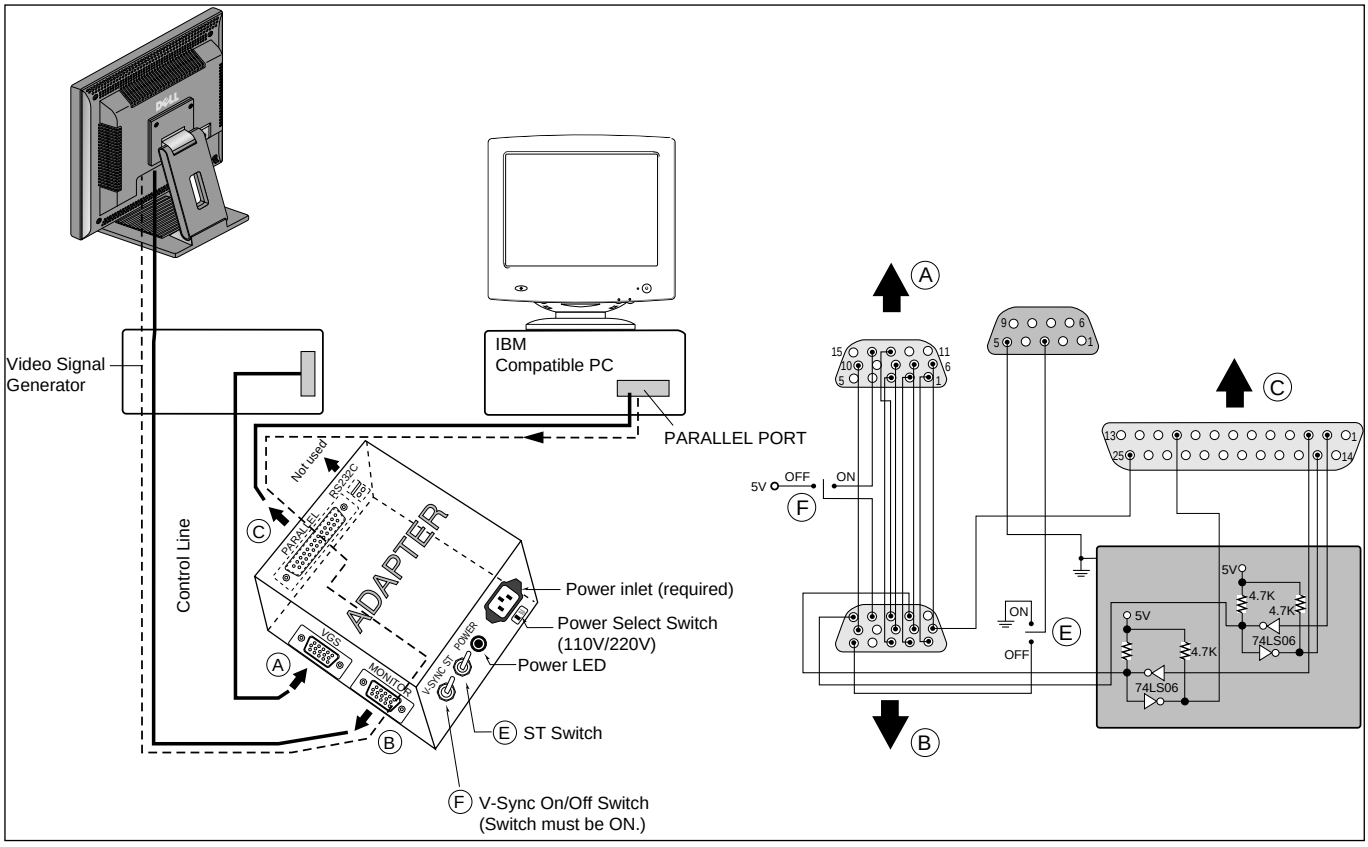
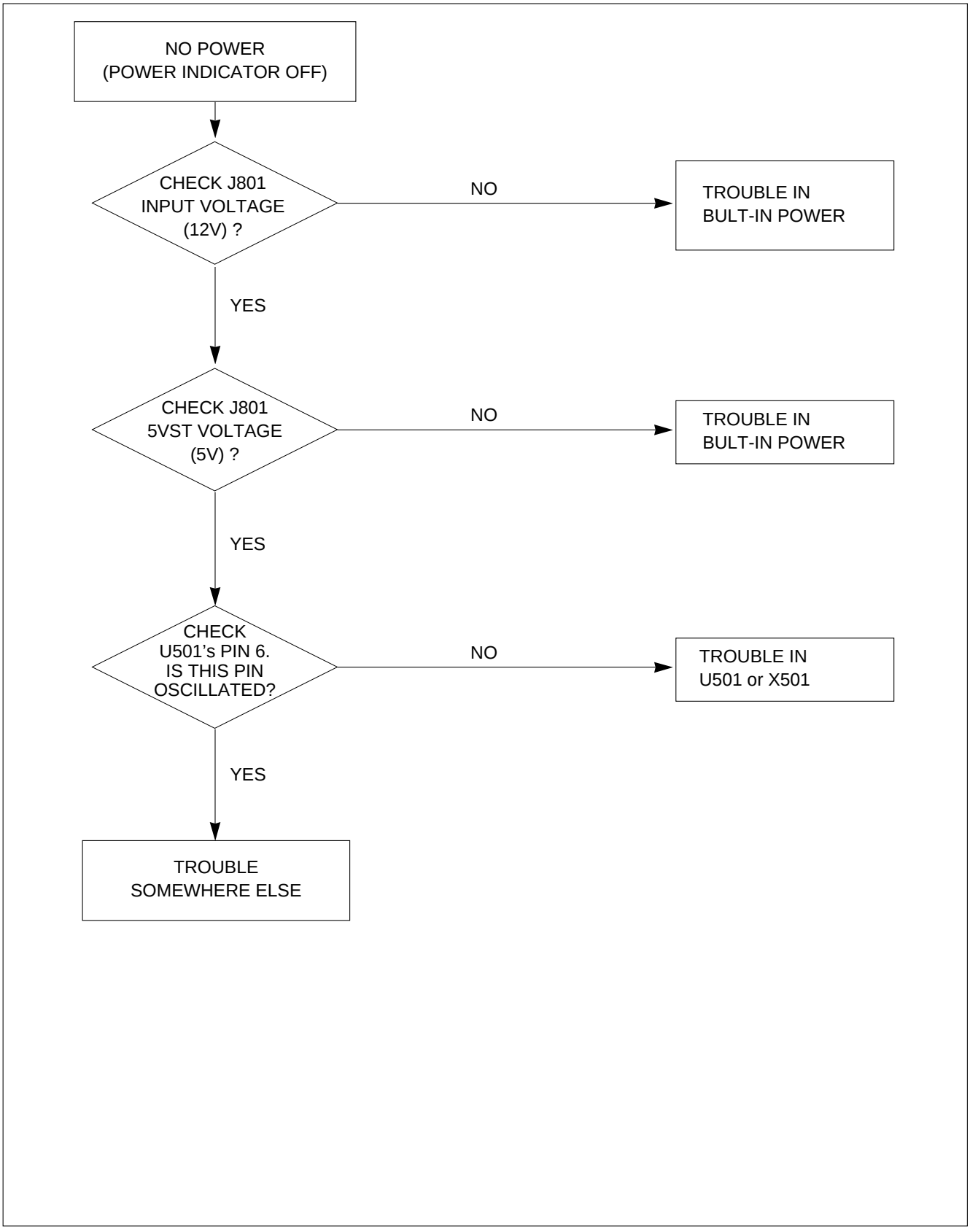


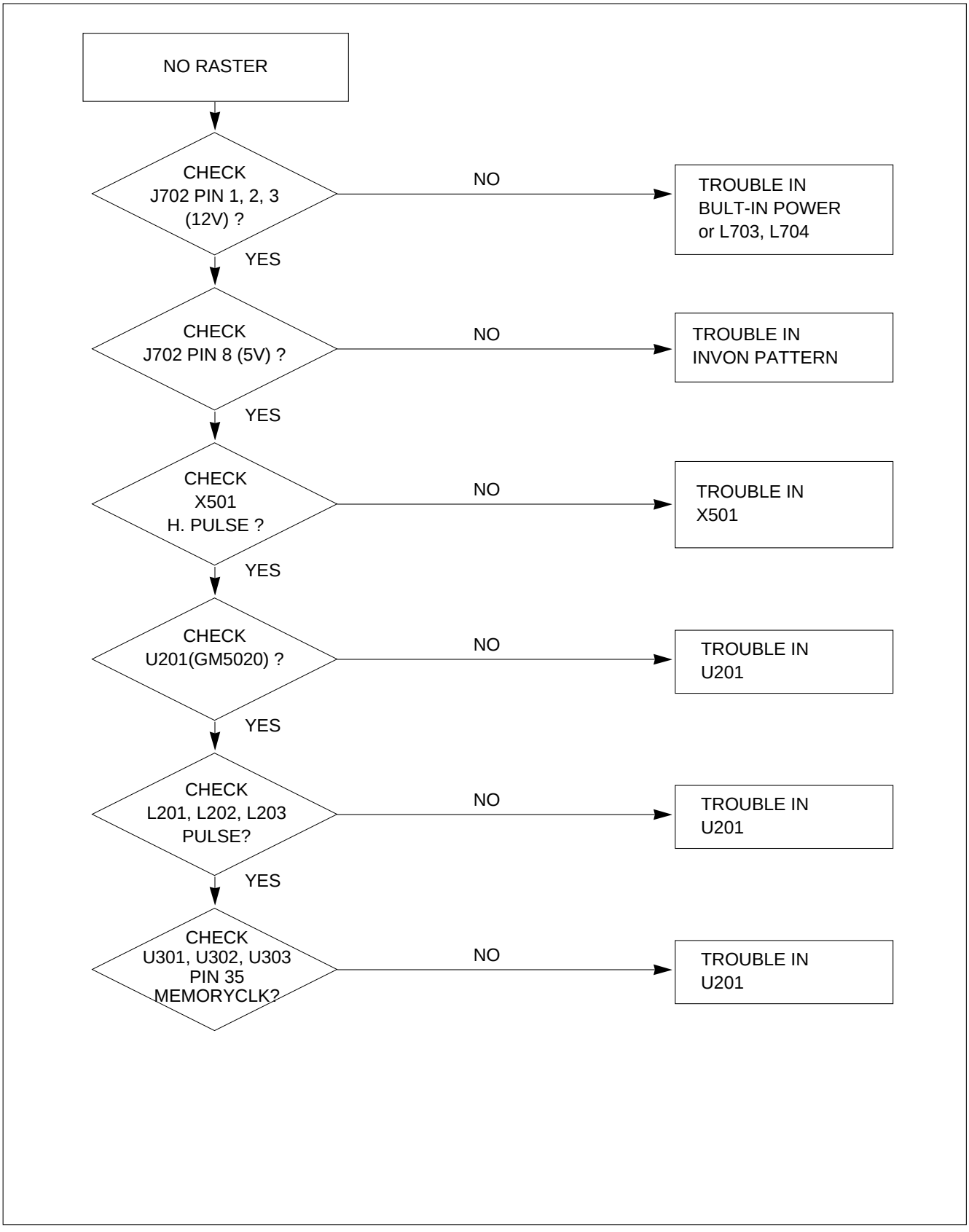
Figure 1. Cable Connection

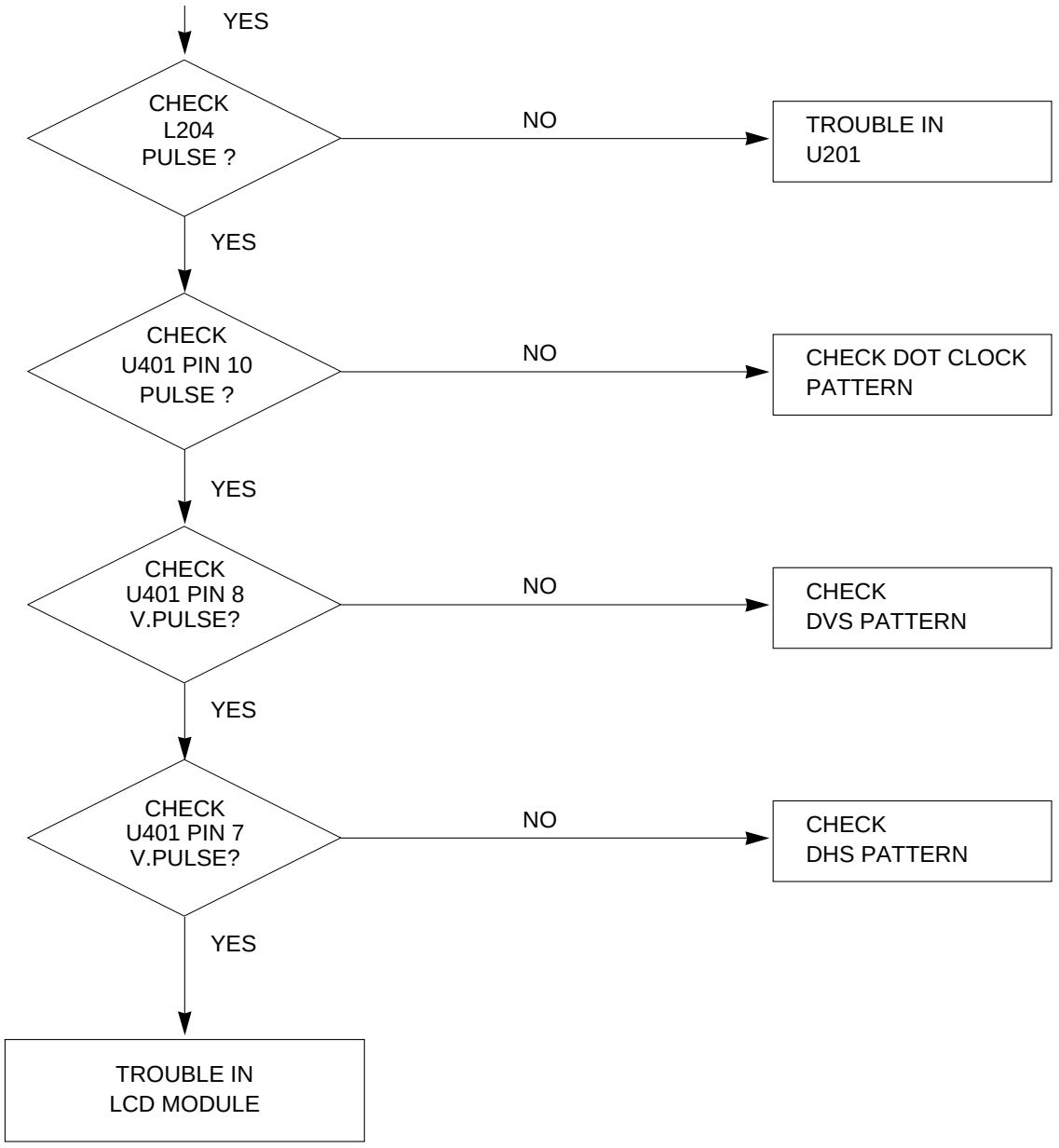
TROUBLESHOOTING GUIDE

1. NO POWER

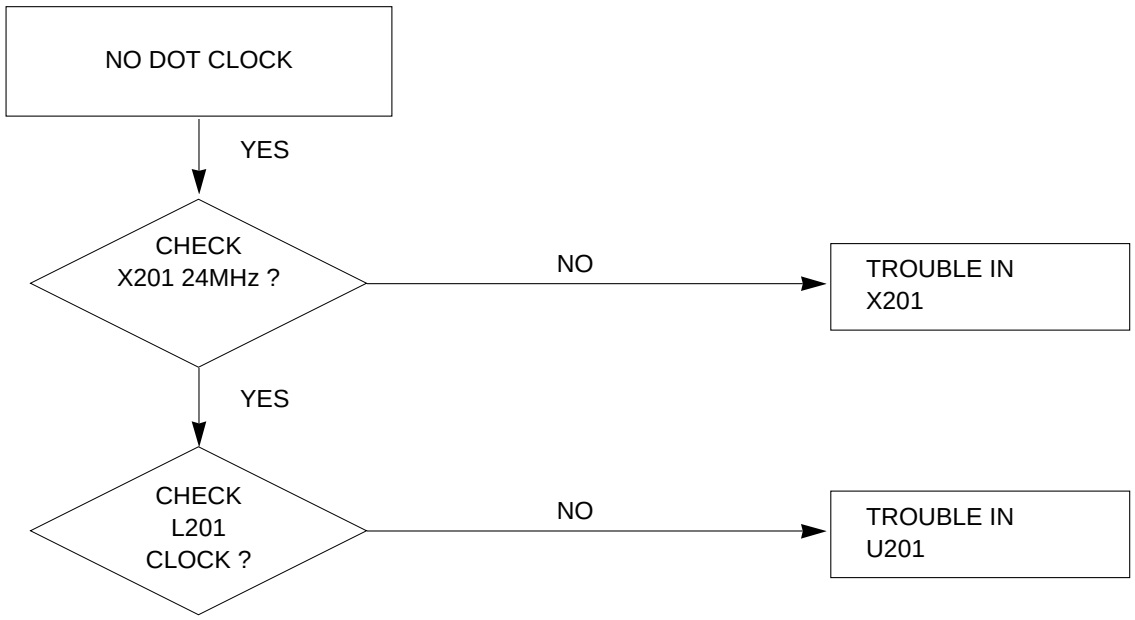


2. NO RASTER


NO RASTER
CHECK
J702 PIN 1, 2, 3
(12V) ?
NO
TROUBLE IN
BULT-IN POWER
or L703, L704
YES
CHECK
J702 PIN 8 (5V) ?
NO
TROUBLE IN
INVON PATTERN
YES
CHECK
X501
H. PULSE ?
NO
TROUBLE IN
X501
YES
CHECK
U201(GM5020) ?
NO
TROUBLE IN
U201
YES
CHECK
L201, L202, L203
PULSE?
NO
TROUBLE IN
U201
YES
CHECK
U301, U302, U303
PIN 35
MEMORYCLK?
NO
TROUBLE IN
U201

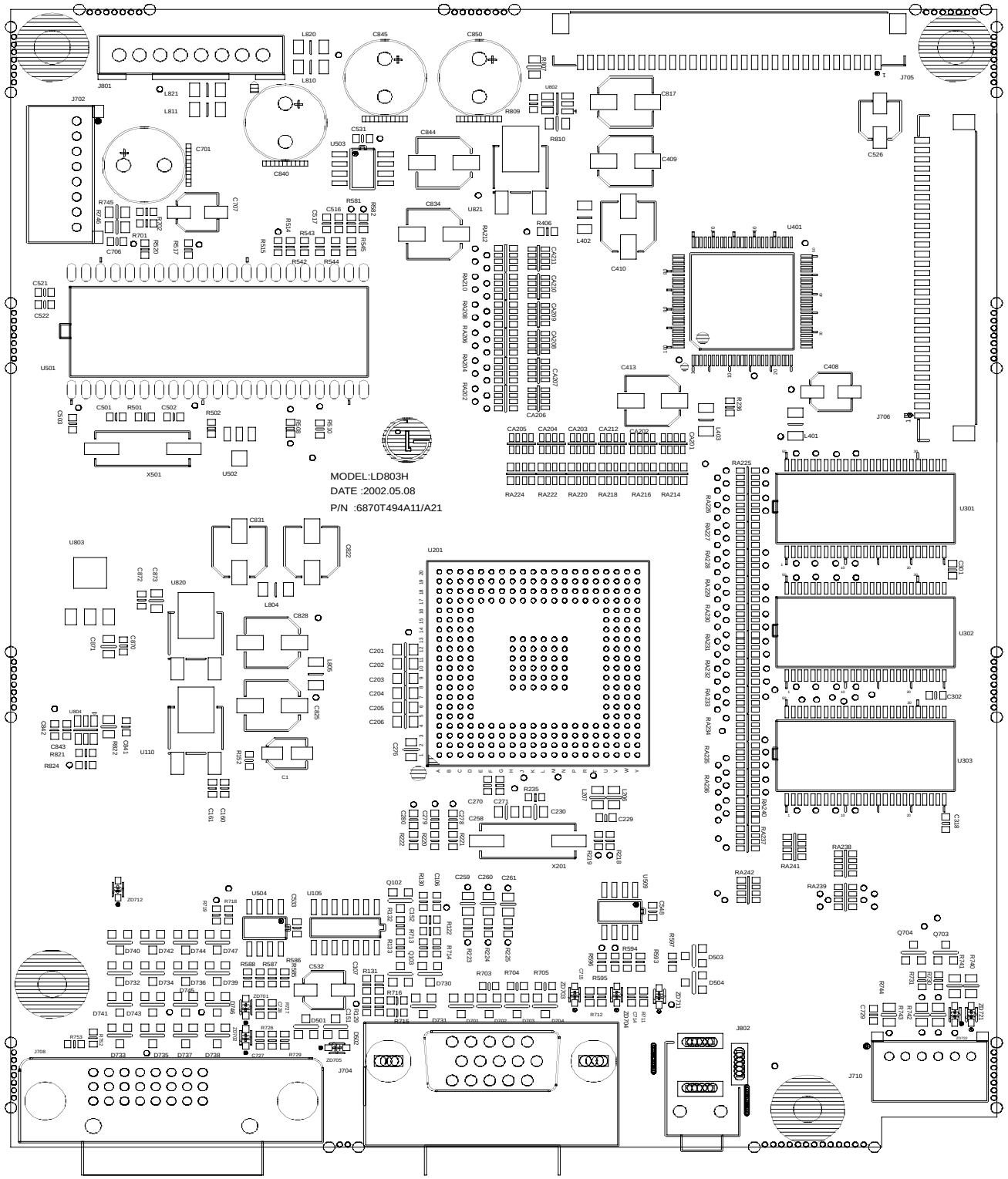

YES
CHECK
L204
PULSE ?
NO
TROUBLE IN
U201
YES
CHECK
U401 PIN 10
PULSE ?
NO
CHECK DOT CLOCK
PATTERN
YES
CHECK
U401 PIN 8
V.PULSE?
NO
CHECK
DVS PATTERN
YES
CHECK
U401 PIN 7
V.PULSE?
NO
CHECK
DHS PATTERN
YES
TROUBLE IN
LCD MODULE

3. NO CLOCK (CLOCK GENERATOR)

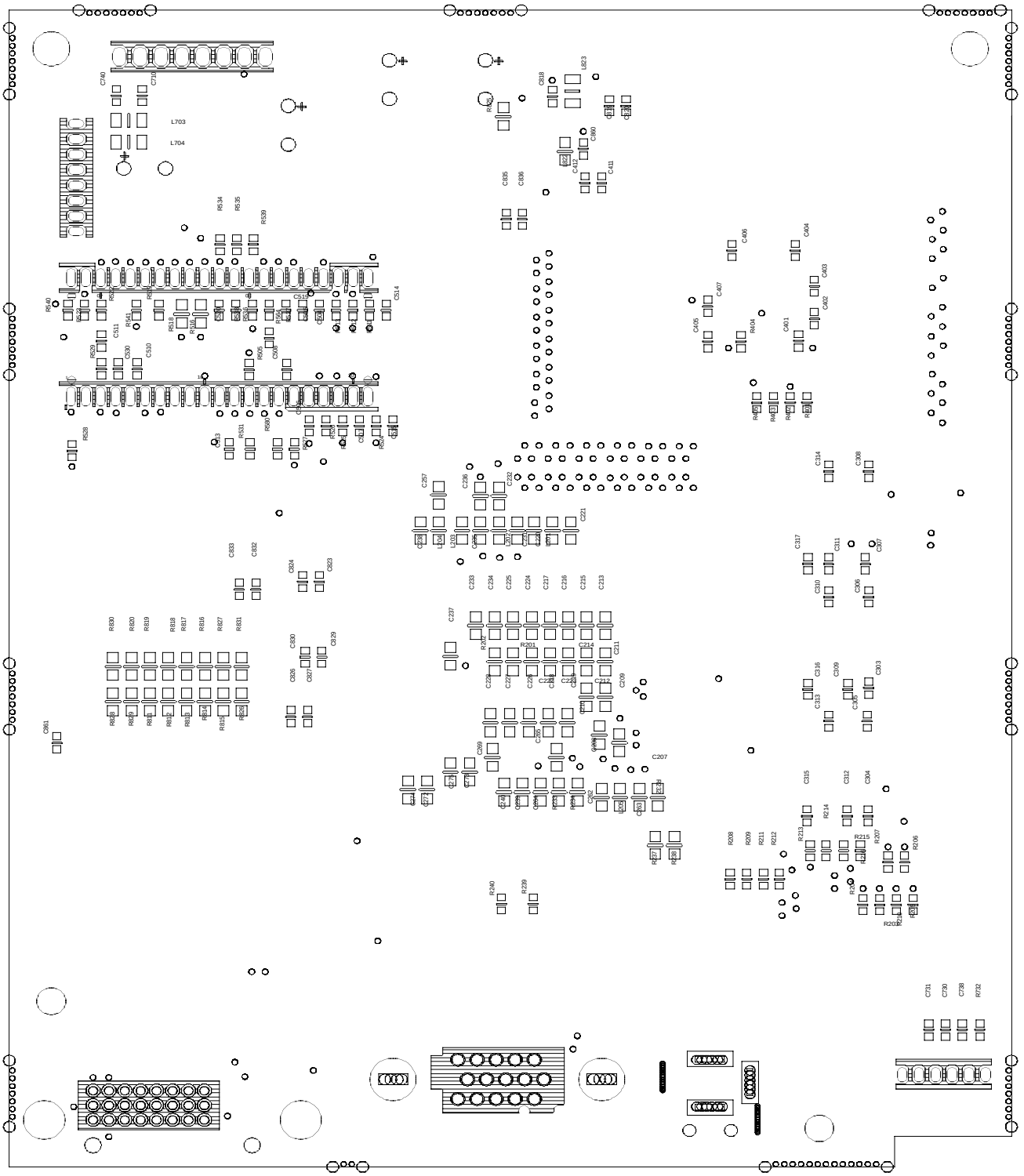


PRINTED CIRCUIT BOARD

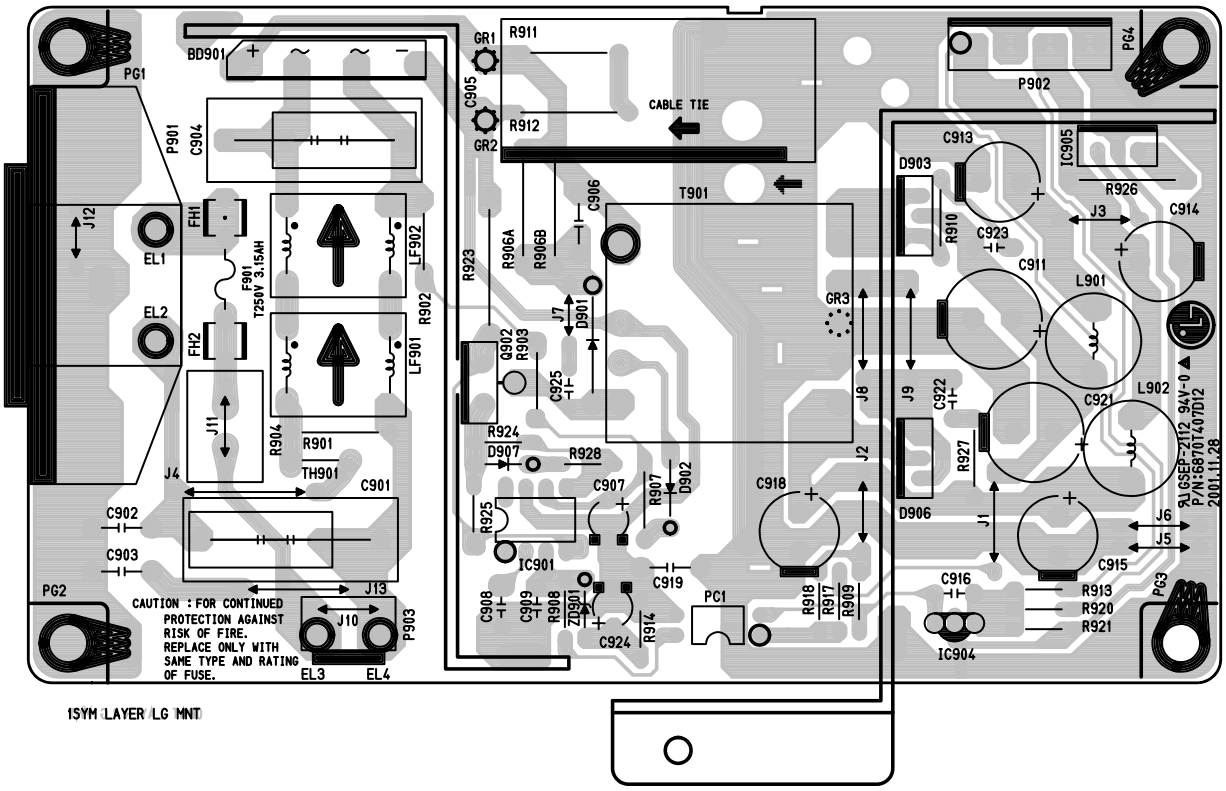
1. MAIN BOARD (Component Side)



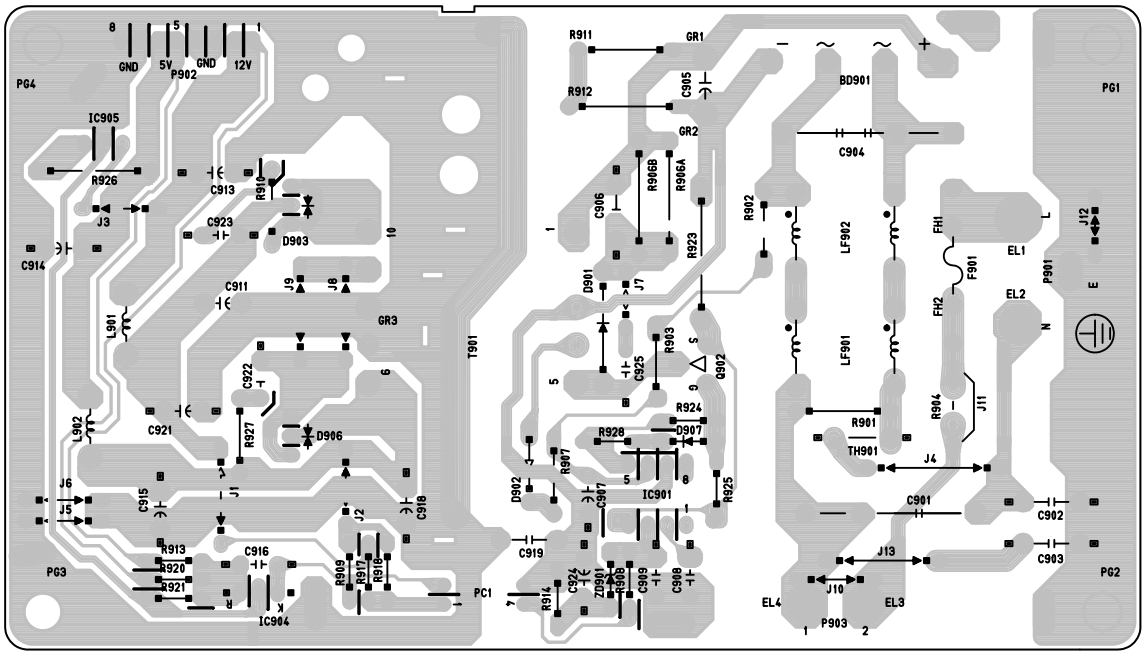
2. MAIN BOARD (Solder Side)



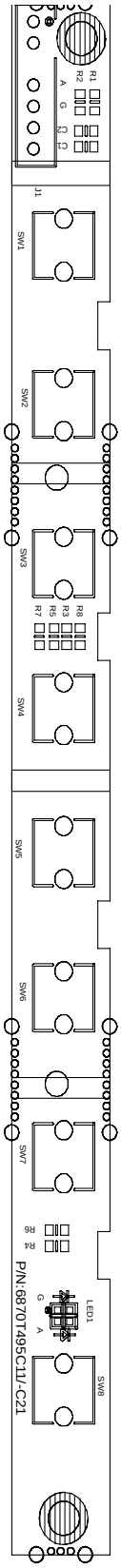
3. POWER BOARD (Component Side)



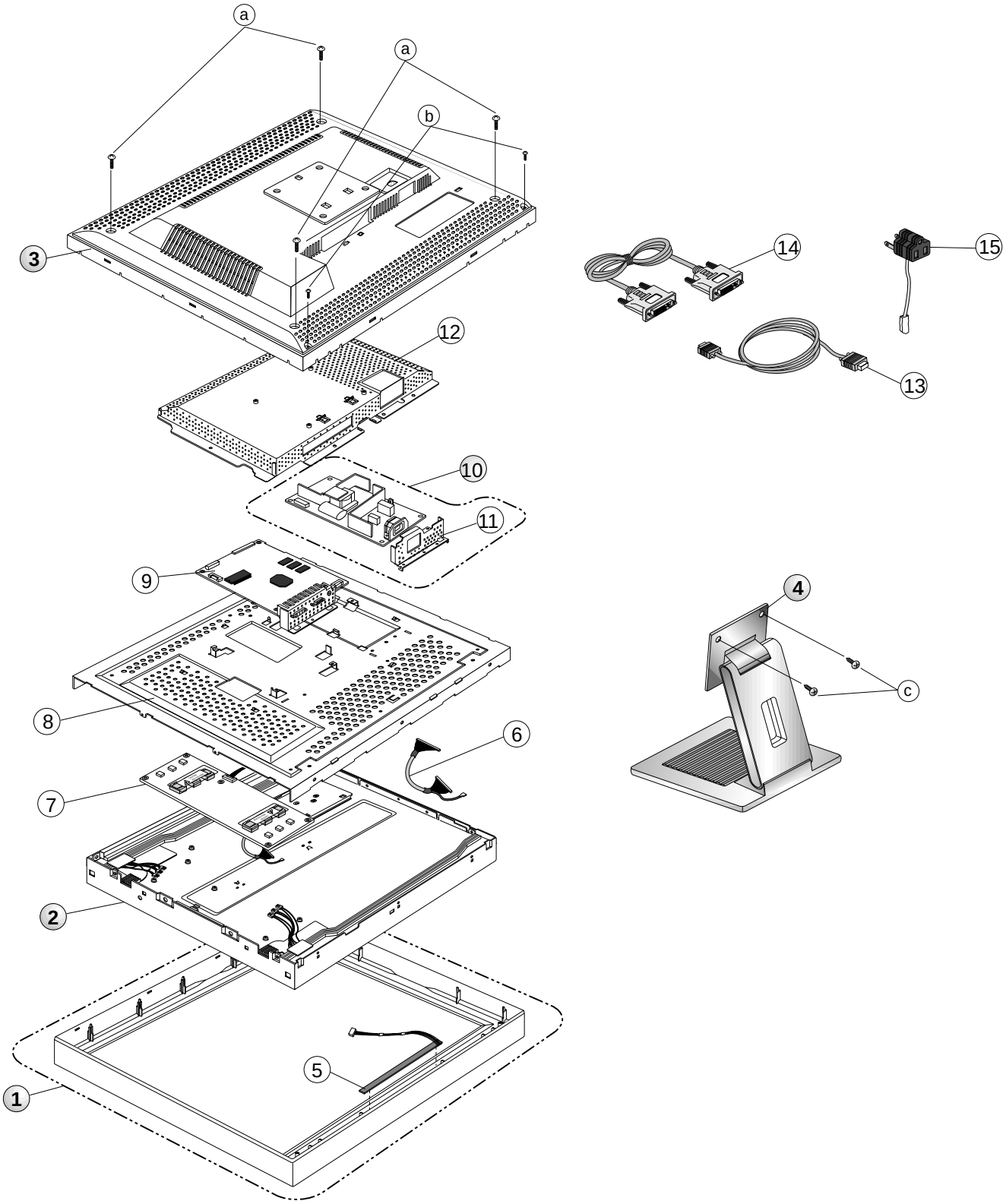
4. POWER BOARD (Solder Side)



5. CONTROL BOARD



EXPLODED VIEW



EXPLODED VIEW PARTS LIST

*** Note:** Safety mark ⚠

Ref. No.	Part No.		Description
1	3091TKL045A		CABINET ASSEMBLY, LD803H BRAND 3090TKL048 ..
2	6304FLP034A		LCD(LIQUID CRYSTAL DISPLAY), LM181E06-A4M1 LG PHILPS TFT COLOR SXGA 18.1" LVDS SMM
3	3809TKL025C		BACK COVER ASSEMBLY, 3808TKL030A
4	3043TKK091B		TILT SWIVEL ASSEMBLY
5	6871TST300A		PWB(PCB) ASSEMBLY, SUB, LD803H CONTROL TOTAL BRAND
6	6631T11012P		CONNECTOR ASSEMBLY, 30P H-H 100MM UL20276 PANEL LINK LB886F
7	6633TZA008C	⚠	INVERTER ASSEMBLY, ALPS KUBNKM045A 6-LAMPS,18" DELL
8	4951TKS078B		METAL ASSEMBLY, FRAME MAIN - LB886F
9	3313TL8018A		MAIN TOTAL ASSEMBLY, LD803H BRAND CL-29
10	6871TPT226A		PWB(PCB) ASSEMBLY, POWER, LD803H POWER TOTAL BRAND
11	4814TKK187A		SHIELD, REAR LB886F
12	4950TKK429A		METAL, REAR LB800H
13	6850TD9001G		CABLE, D-SUB, UL 2990-9C(7.5) DT 1870MM BLACK(9930) , DM
14	6866TDV004J		CABLE, DVI, UL20276 DT 2000MM BLACK(9930) LG883D DM
15	381-240A		ADAPTER, AC. KPR-24 KAWASAKI 125V 15A BLACK **-Only Japan**
a	1SZZTER001H		SCREW, DRAWING, D3.0 L10.0 MSWR/BK .
b	332-113S		SCREW, DRAWING, D3.0 L12.0 MSWR/BK .
c	332-105G		SCREW, DRAWING, PVS+4*10(MSWR/BK)

REPLACEMENT PARTS LIST

CAUTION: BEFORE REPLACING ANY OF THESE COMPONENTS,
READ CAREFULLY THE **SAFETY PRECAUTIONS** IN THIS MANUAL.
* NOTE : **S** SAFETY Mark ⚠
AL ALTERNATIVE PARTS

DATE: 2002. 05. 14.

*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		MAIN BOARD		
		CAPACITORS		
		C1	0CH8106F691	10UF 16V M 105STD (CYL) R/TP
		C106	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C107	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C151	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C160	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C161	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C201	0CH3103K516	10000PF 50V K B 2012 R/TP
		C202	0CH3103K516	10000PF 50V K B 2012 R/TP
		C203	0CH3103K516	10000PF 50V K B 2012 R/TP
		C204	0CH3103K516	10000PF 50V K B 2012 R/TP
		C205	0CH3103K516	10000PF 50V K B 2012 R/TP
		C206	0CH3103K516	10000PF 50V K B 2012 R/TP
		C207	0CH3103K516	10000PF 50V K B 2012 R/TP
		C208	0CH3103K516	10000PF 50V K B 2012 R/TP
		C209	0CH3103K516	10000PF 50V K B 2012 R/TP
		C210	0CH3103K516	10000PF 50V K B 2012 R/TP
		C211	0CH3103K516	10000PF 50V K B 2012 R/TP
		C212	0CH3103K516	10000PF 50V K B 2012 R/TP
		C213	0CH3103K516	10000PF 50V K B 2012 R/TP
		C214	0CH3103K516	10000PF 50V K B 2012 R/TP
		C215	0CH3103K516	10000PF 50V K B 2012 R/TP
		C216	0CH3103K516	10000PF 50V K B 2012 R/TP
		C217	0CH3103K516	10000PF 50V K B 2012 R/TP
		C218	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C219	0CH3103K516	10000PF 50V K B 2012 R/TP
		C220	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C221	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C222	0CH3103K516	10000PF 50V K B 2012 R/TP
		C223	0CH3103K516	10000PF 50V K B 2012 R/TP
		C224	0CH3103K516	10000PF 50V K B 2012 R/TP
		C225	0CH3103K516	10000PF 50V K B 2012 R/TP
		C226	0CH3103K516	10000PF 50V K B 2012 R/TP
		C227	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C228	0CH3103K516	10000PF 50V K B 2012 R/TP
		C229	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C230	0CH6150K416	15PF 50V J NP0 2012 R/TP
		C231	0CH6680K416	68PF 50V J NP0 2012 R/TP
		C232	0CH6680K416	68PF 50V J NP0 2012 R/TP
		C233	0CH3103K516	10000PF 50V K B 2012 R/TP
		C234	0CH3103K516	10000PF 50V K B 2012 R/TP
		C235	0CH6680K416	68PF 50V J NP0 2012 R/TP
		C236	0CH6680K416	68PF 50V J NP0 2012 R/TP
		C237	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C258	0CH6150K416	15PF 50V J NP0 2012 R/TP
		C259	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C260	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C261	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C262	0CH6330K416	33PF 50V J NP0 2012 R/TP
		C264	0CH6221K416	220PF 50V J NP0 2012 R/TP
		C265	0CH6470K416	47PF 50V J NP0 2012 R/TP
		C269	0CH3103K516	10000PF 50V K B 2012 R/TP
		C270	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		C271	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C272	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C273	0CH3103K516	10000PF 50V K B 2012 R/TP
		C274	0CH3103K516	10000PF 50V K B 2012 R/TP
		C275	0CH3104K566	0.1UF 50V K X 2012 R/TP
		C276	0CH3103K516	10000PF 50V K B 2012 R/TP
		C278	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C279	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C280	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C301	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C302	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C303	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C304	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C305	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C306	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C307	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C308	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C309	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C310	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C311	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C312	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C313	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C314	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C315	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C316	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C317	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C318	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C401	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C402	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C403	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C404	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C405	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C406	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C407	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C408	0CH8226F691	22UF 16V M 105STD (CYL) R/TP
		C409	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C410	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C411	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C412	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C413	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C501	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C502	0CC180CK41A	18PF 1608 50V 5% R/TP NP0
		C503	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C504	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C505	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C506	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C507	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C508	0CK222CK51A	2200PF 1608 50V 10% R/TP B(Y5P)
		C510	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C511	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C513	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C514	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C515	0CC470CK41A	47PF 1608 50V 5% R/TP NP0
		C516	0CC101CK41A	100PF 1608 50V 5% R/TP NP0

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		C517	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C519	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C520	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C521	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C522	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C526	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C531	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C532	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C533	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C548	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C701	0CE477EH618	470UF KMG 25V M FL TP 5
		C706	0CC221CK41A	220PF 1608 50V 5% R/TP NP0
		C707	0CH8106J691	10UF 35V M 105STD (CYL) R/TP
		C710	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C714	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C715	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C727	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C728	0CC101CK41A	100PF 1608 50V 5% R/TP NP0
		C729	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C730	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C731	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C738	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C740	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C817	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C818	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C819	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C820	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C822	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C823	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C824	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C825	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C826	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C827	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C828	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C829	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C830	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C831	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C832	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C833	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C834	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C835	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C836	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C840	0CE477EH618	470UF KMG 25V M FL TP 5
		C841	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C842	0CK103CK51A	0.01UF 1608 50V 10% R/TP B(Y5P)
		C843	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C844	0CE107WF6DC	100UF MVK 16V 20% R/TP(SMD) SMD
		C845	0CE477EH618	470UF KMG 25V M FL TP 5
		C850	0CE477EH618	470UF KMG 25V M FL TP 5
		C860	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C861	0CK105CD56A	1UF 1608 10V 10% R/TP X7R
		C870	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C871	0CH6101K416	100PF 50V J NP0 2012 R/TP
		C872	0CC102CK41A	1000PF 1608 50V 5% R/TP NP0
		C873	0CH6101K416	100PF 50V J NP0 2012 R/TP
DIODEs				
		D501	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D502	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D503	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30
		D504	0DS301109AA	MMBD301LT1 TP MOTOROLA SOT23 30

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		D701	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D702	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D703	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D704	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D730	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D731	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D732	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D733	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D734	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D735	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D736	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D737	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D738	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D739	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D740	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D741	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D742	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D743	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D744	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D745	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D746	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D747	0DS226009AA	KDS226 TP KEC SOT-23 80V 300MA
		D903	0DRIR00011B	16CTQ100 I.R ST TO220 100V 16A
		D906	0DRIR00021A	30CTQ060 I.R ST TO220 60V 30A 1
		ZD701	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD702	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD703	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD704	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD705	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD711	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD721	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
		ZD722	0DZ560009DA	UDZ S 5.6B TP ROHM-K SOD323 200
ICs				
		U105	0ITI741400T	SN74AC14DR 14,SOP R/TP HEX INVE
		U110	0ISS780500H	KA78M05-R 3P,D-PAK TP 5V 0.5A R
		U201	0IPRPGN001A	GM5020 GENESIS 292P,PBGA TRAY S
		U301	0IEB121616A	M12L16161A-7T 50P TSOP ST 16M(5
		U302	0IEB121616A	M12L16161A-7T 50P TSOP ST 16M(5
		U303	0IEB121616A	M12L16161A-7T 50P TSOP ST 16M(5
		U401	0ILNRTH001A	THC63LVD823 THINE MICROSYSTEMS
		U501	0IZZTSZ187A	BD48 42PIN BK MICOM
		U502	0IKE704200J	KIA7042AF SOT-89 TP 4.2V VOLTAG
		U503	0ICS240813B	CAT24WC08J-TE13 8P,SOIC R/TP 8K
		U504	0ISS524202B	S524A40X21(SCT0) SAMSUNG ELECTR
		U509	0ISS524202B	S524A40X21(SCT0) SAMSUNG ELECTR
		U802	0TFFC80009A	FAIRCHILD FDC6326L R/TP SOT-6 2
		U803	0IPMGFA003B	RC1117S-2.5 FAIRCHILD SOT-223 R
		U804	0TFFC80009A	FAIRCHILD FDC6326L R/TP SOT-6 2
		U820	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATOR
		U821	0IRH033200A	BA033FP-E2 MOLD-3 TP REGULATOR
COILs & COREs				
		L201	0RH0562D622	56 1/10W 5 D.R/TP
		L202	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L203	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L204	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L205	6210TCE001R	HB-1S2012-400JT CERATECH 2012MM
		L206	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L207	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM

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		L401	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L402	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L403	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L703	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L704	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L804	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L805	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L810	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L811	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L820	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L821	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
		L822	6210TCE001P	HB-1S2012-121JT CERATECH 2012MM
		L823	6210TCE001G	HH-1M3216-501 CERATEC 3216MM R/
	TRANSISTOR			
		Q102	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q103	0TR390409AE	FAIRCHILD KST3904(LGEMTF) TP SO
		Q703	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN E
		Q704	0TR162309CA	KSC1623 TP SAMSUNG SOT23 NPN E
		Q902	0TFFN10004A	INFINEON SPP11N60C2 ST TO220 60
	RESISTORs			
		R122	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R129	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R130	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R131	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R132	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R133	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R201	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R202	0RH2001D622	2.0K 1/10W 5 D.R/TP
		R203	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R204	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R205	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R206	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R207	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R208	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R209	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R210	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R211	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R212	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R213	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R214	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R215	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R216	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R218	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R219	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R220	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R221	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R222	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R223	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R224	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R225	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R233	0RH0222D622	22 1/10W 5 D.R/TP
		R234	0RH0222D622	22 1/10W 5 D.R/TP
		R235	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/TP
		R236	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R237	0RH0000D622	0 1/10W P-TYPE TAPPING
		R238	0RH0000D622	0 1/10W P-TYPE TAPPING
		R239	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R240	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP

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		R401	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R402	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R404	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R405	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R406	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R501	0RJ1004D677	1000000 OHM 1/10 W 5% 1608 R/TP
		R502	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R505	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R508	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R511	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R512	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R513	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R514	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R515	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R516	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R517	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R518	0RH1001D622	1K OHM 1 / 10 W 2012 5.00% D
		R519	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R522	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R523	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R524	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R525	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R526	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R527	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/TP
		R528	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R529	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R531	0RJ3302D677	33K OHM 1/10 W 5% 1608 R/TP
		R534	0RJ1001D677	1K OHM 1/10 W 5% 1608 R/TP
		R535	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R536	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R537	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R538	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R539	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R540	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R541	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R542	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R543	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R544	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R545	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R564	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R580	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R581	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R582	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R585	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R586	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R587	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R588	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R593	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R594	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R595	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R596	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R597	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R701	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R703	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R704	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R705	0RJ0752D677	75 OHM 1/10 W 5% 1608 R/TP
		R711	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R712	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R713	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP
		R714	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R715	0RJ1002D677	10K OHM 1/10 W 5% 1608 R/TP
		R716	0RJ0472D677	47 OHM 1/10 W 5% 1608 R/TP

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R718	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R719	0RJ0222D677	22 OHM 1/10 W 5% 1608 R/TP
		R726	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R727	0RJ1000D677	100 OHM 1/10 W 5% 1608 R/TP
		R729	0RJ4700D677	470 OHM 1/10 W 5% 1608 R/TP
		R730	0RJ5100D677	510 OHM 1/10 W 5% 1608 R/TP
		R731	0RJ2700D677	270 OHM 1/10 W 5% 1608 R/TP
		R740	0RH0000D622	0 1/10W P-TYPE TAPPING
		R741	0RH0000D622	0 1/10W P-TYPE TAPPING
		R742	0RH0000D622	0 1/10W P-TYPE TAPPING
		R743	0RH0000D622	0 1/10W P-TYPE TAPPING
		R744	0RH0000D622	0 1/10W P-TYPE TAPPING
		R745	0RH0000D622	0 1/10W P-TYPE TAPPING
		R746	0RH0000D622	0 1/10W P-TYPE TAPPING
		R752	0RJ1003D677	100K OHM 1/10 W 5% 1608 R/TP
		R753	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R807	0RH0000D622	0 1/10W P-TYPE TAPPING
		R809	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R810	0RH5600D622	560 1/10W 5 D.R/TP
		R811	0RH0332D622	33 1/10W 5 D.R/TP
		R812	0RH0332D622	33 1/10W 5 D.R/TP
		R813	0RH0332D622	33 1/10W 5 D.R/TP
		R814	0RH0332D622	33 1/10W 5 D.R/TP
		R815	0RH0332D622	33 1/10W 5 D.R/TP
		R816	0RH0332D622	33 1/10W 5 D.R/TP
		R817	0RH0332D622	33 1/10W 5 D.R/TP
		R818	0RH0332D622	33 1/10W 5 D.R/TP
		R819	0RH0332D622	33 1/10W 5 D.R/TP
		R820	0RH0332D622	33 1/10W 5 D.R/TP
		R821	0RJ2202D677	22K OHM 1/10 W 5% 1608 R/TP
		R822	0RH5600D622	560 1/10W 5 D.R/TP
		R824	0RJ0000D677	0 OHM 1/10 W 5% 1608 R/TP
		R826	0RH0332D622	33 1/10W 5 D.R/TP
		R827	0RH0332D622	33 1/10W 5 D.R/TP
		R828	0RH0332D622	33 1/10W 5 D.R/TP
		R829	0RH0332D622	33 1/10W 5 D.R/TP
		R830	0RH0332D622	33 1/10W 5 D.R/TP
		RA202	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA204	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA206	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA208	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA210	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA212	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA214	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA216	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA218	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA220	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA222	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA224	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA225	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA226	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA227	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA228	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA229	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA230	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA231	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA232	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA233	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA234	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA235	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA236	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA237	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI

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*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		RA238	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA239	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA240	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA241	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		RA242	0RHZTCZ001A	100 OHM 1/16 W 5% 3215 R/TP CHI
		OTHERs		
		X201	6202TST001E	SX-1 SUNNY CHIP 24MHZ 30PPM 20P
		X501	6202TST001E	SX-1 SUNNY CHIP 24MHZ 30PPM 20P
		POWER BOARD		
⚠		C901	0CBZTBU002B	BULK PCX2 335 474K
⚠		C902	0CKZTBU003B	SC E 332M 12.5BW7 250V BK7.5 SA
⚠		C903	0CKZTBU003B	SC E 332M 12.5BW7 250V BK7.5 SA
⚠		C904	0CBZTBU002A	BULK PCX2 335 224K
		C905	0CZZTAB002C	KMF 18*40 SYE / SWE 400V 120UF
		C906	0CK10302945	0.01UF 2KV Z F TR
		C907	0CE476EK638	47UF KMG 50V M FM5 TP 5
		C908	0CQ2721N419	2700PF 100V J PE NI TP
		C909	0CK1020K515	1000PF 50V K B TR
		C911	0CE228EF630	2200UF KMG 16V M FM5 BULK
		C913	0CE108BF630	1000UF KME 16V M FM5 BULK
		C914	0CE228ED630	2200UF KMG,RD 10V 20% BULK FM5
		C915	0CE228ED630	2200UF KMG,RD 10V 20% BULK FM5
		C916	181-288L	MKT 100V 823JTR PHS26823
		C918	0CE228ED630	2200UF KMG,RD 10V 20% BULK FM5
⚠		C919	0CKZTBU003B	SC E 332M 12.5BW7 250V BK7.5 SA
		C921	0CE228EF630	2200UF KMG 16V M FM5 BULK
		C922	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1000P
		C923	0CKZTTA002E	EKR3A102K09FK5 SAMWHA 1KV 1000P
		C924	0CE336BH638	33UF KME 25V M FM5 TP5
		BD901	0DD360000DA	D3SBA60 BK SHINDENGEN 600V 2.
		D901	0DD400709CB	UF4007 TP G.I DO204AL 1000V 1A
		D902	0DR400409AB	UF4004 TP G.I DO204AL 400V 1A 3
		D907	0DS113309AA	1SS133 TP ROHM KOREA DO34 90V 0
		ZD901	0DZ470009BC	GDZ4.7B TP GRANDE DO34 0.5W 4.7
⚠		F901	0FZZTTH001D	TIME LAG HBC 3.15A/250V,215 3.1
		FH1	430-858C	AFC-520 BAE EUN TA
		FH2	430-858C	AFC-520 BAE EUN TA
		IC901	0IPMGIH001A	ICE2AS01 INFINEON 8P,DIP ST OFF
		IC904	0ISS431000A	KA431AZ (LM431AZ)
		IC905	0ISS780500F	KA7805
		L901	150-A85F	LX31 GET BAR CHOKE,3.3UH,LB886F
		L902	150-A85F	LX31 GET BAR CHOKE,3.3UH,LB886F
⚠		LF901	6200TZZ001A	- GO BK L/FILTER,9MH,LB886F
⚠		LF902	6200TZZ001A	- GO BK L/FILTER,9MH,LB886F
⚠		P901	6620TKB002A	BAE EUN AC UNIVERSAL 3PIN BLACK
⚠		PC1	0ILI817000E	LTV-817M B 4P BK PHOTO COUPLER
		R901	0RD6803A609	680K OHM 1/2 W (7.0) 5% TA52
		R902	0RD3902A609	39K OHM 1/2 W (7.0) 5% TA52
		R903	0RD3902A609	39K OHM 1/2 W (7.0) 5% TA52
		R906A	0RX5102J609	51KOHM 1 W 5% TA52
		R906B	0RX5102J609	51KOHM 1 W 5% TA52
		R907	0RD0102Q609	10 1/4W(3 5% TA52
		R908	0RD0222Q609	22 1/4W(3 5% TA52
		R909	0RD1001Q609	1K 1/4W(3 5% TA52
		R910	0RD0431A609	4.3 OHM 1/2 W (7.0) 5% TA52
		R911	0RD1004A609	1.0M OHM 1/2 W (7.0) 5% TA52
		R912	0RD1004A609	1.0M OHM 1/2 W (7.0) 5% TA52
		R913	0RN1102F409	11K 1/6W 1% TA52

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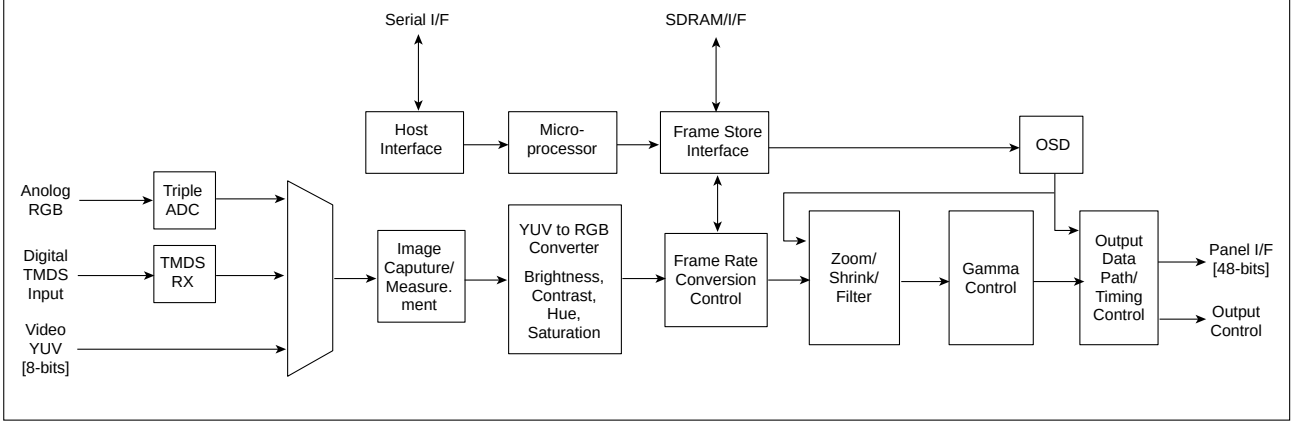
*S	*AL	LOC. NO.	PART NO.	DESCRIPTION / SPECIFICATION
		R914	0RD1002Q609	10K 1/4W(3 5% TA52
		R917	0RD1201Q609	1.20K 1/4W(3 5% TA52
		R918	0RD1000Q609	100 1/4W(3 5% TA52
		R920	0RN4702F409	47K 1/6W 1% TA52
		R921	0RN2701F409	2.70K 1/6W 1% TA52
		R923	0RB0330K607	0.33 OHM 2 W 5% TA62
		R924	0RD0752Q609	75 1/4W(3 5% TA52
		R925	0RD1002Q609	10K 1/4W(3 5% TA52
		R926	0RN0471H609	4.7 OHM 1/2 W 5% TA52
		R927	0RD0102A609	10 OHM 1/2 W (7.0) 5% TA52
		R928	0RD0202Q609	20 1/4W(3 5% TA52
⚠		T901	6170TMZ125B	EER3016 340UH V-10PIN LB886F SI
		TH902	6322TA080AA	TP8D13 DAEWOO +/- 15% 110/220V
CONTROL BOARD				
		C1	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		C2	0CK104CK56A	0.1UF 1608 50V 10% R/TP X7R
		LED1	0DLLT0148AA	LITEON LTST-C195KGJSKT R/TP GRE
		R1	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R2	0RJ4701D677	4.7K OHM 1/10 W 5% 1608 R/TP
		R3	0RJ8200D677	820 OHM 1/10 W 5% 1608 R/TP
		R4	0RJ8200D677	820 OHM 1/10 W 5% 1608 R/TP
		R5	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R6	0RJ1501D677	1.5K OHM 1/10 W 5% 1608 R/TP
		R7	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/TP
		R8	0RJ2201D677	2200 OHM 1/10 W 5% 1608 R/TP
		SW1	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW2	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW3	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW4	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW5	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW6	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW7	140-058E	SKHV10910B LGEC NON 12V 20A HOR
		SW8	140-058E	SKHV10910B LGEC NON 12V 20A HOR

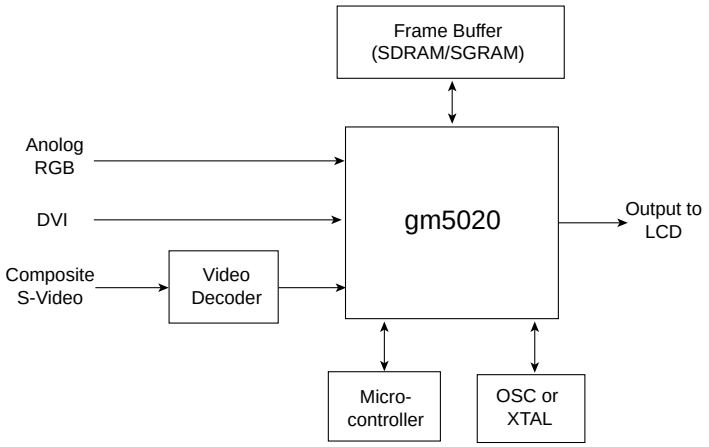
PIN CONFIGURATION

GM5020 GENESIS 292P

FUNCTIONAL BLOCK DIAGRAM

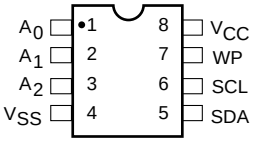


SYSTEM BLOCK DIAGRAM

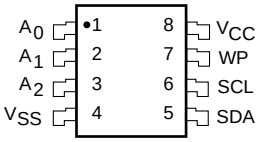


CAT24WC08J-TE13 8P

DIP Package(p)



SOIX Package(J)



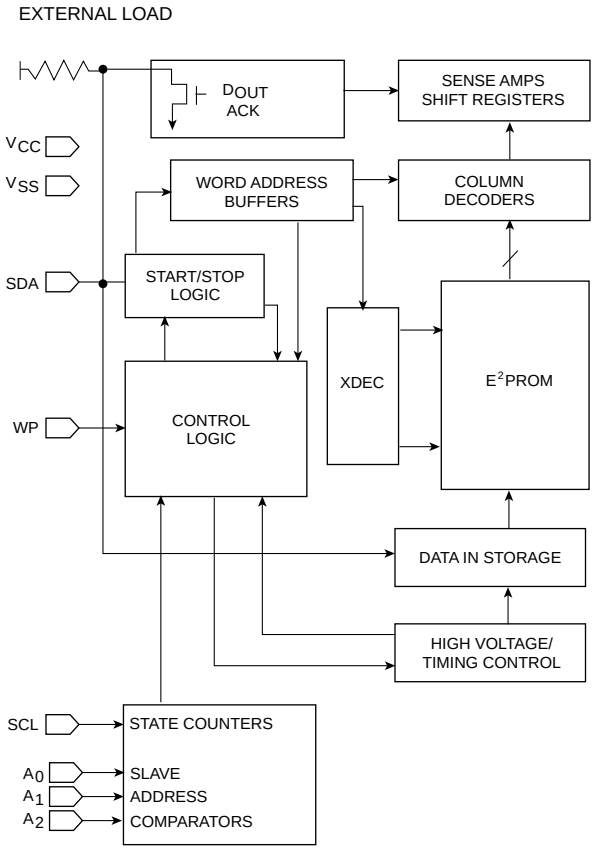
TSSOP Package(U)

PIN CONFIGURATION

PIN FUNCTION

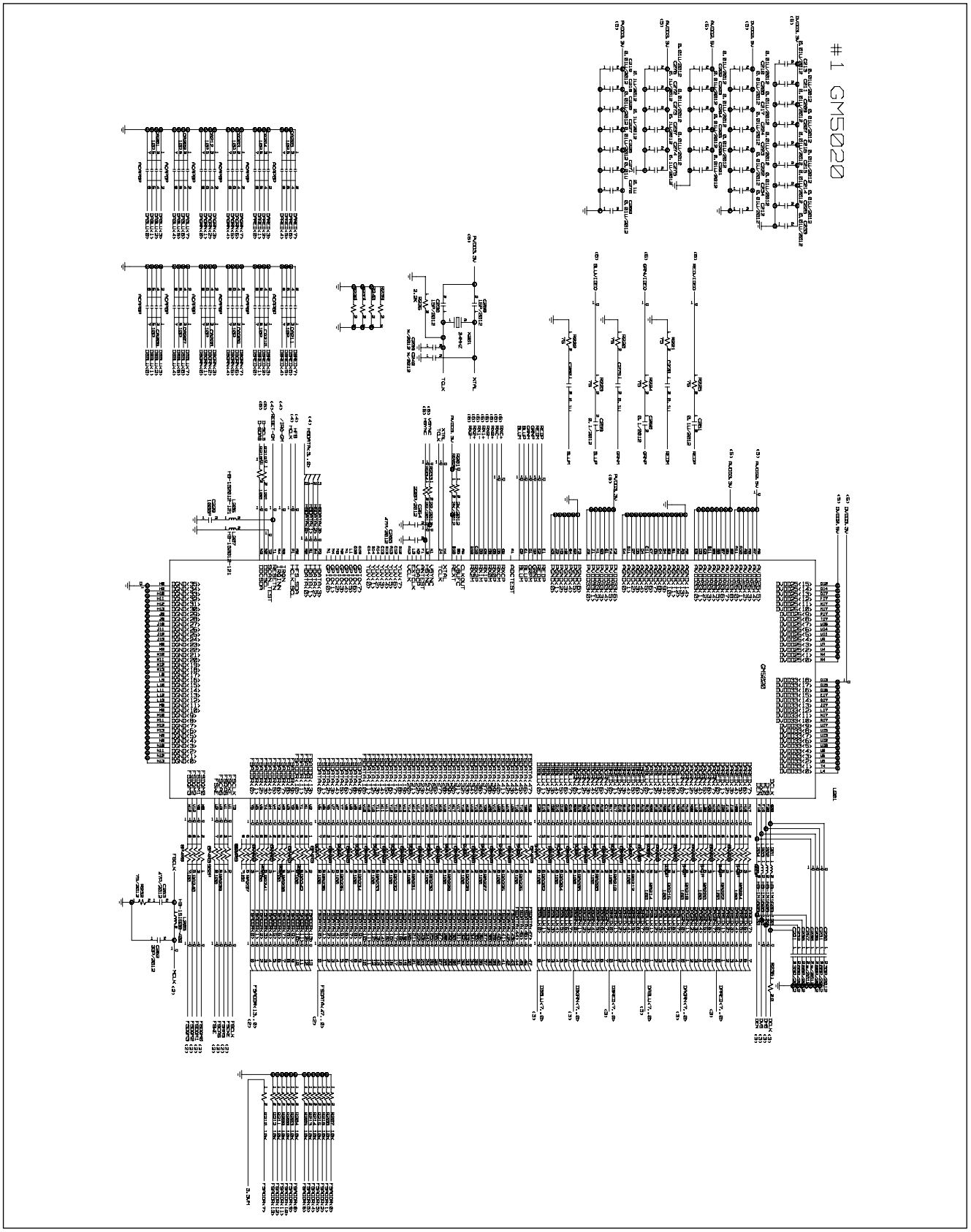
Pin Name	Function
A0, A1, A2	Device Adress Inputs
SDA	Serial Data/Address
SCL	Serial Clock
WP	Write Protect
Vcc	+1.8V to + 6.0V power Supply
Vss	Ground

BLOCK DIAGRAM

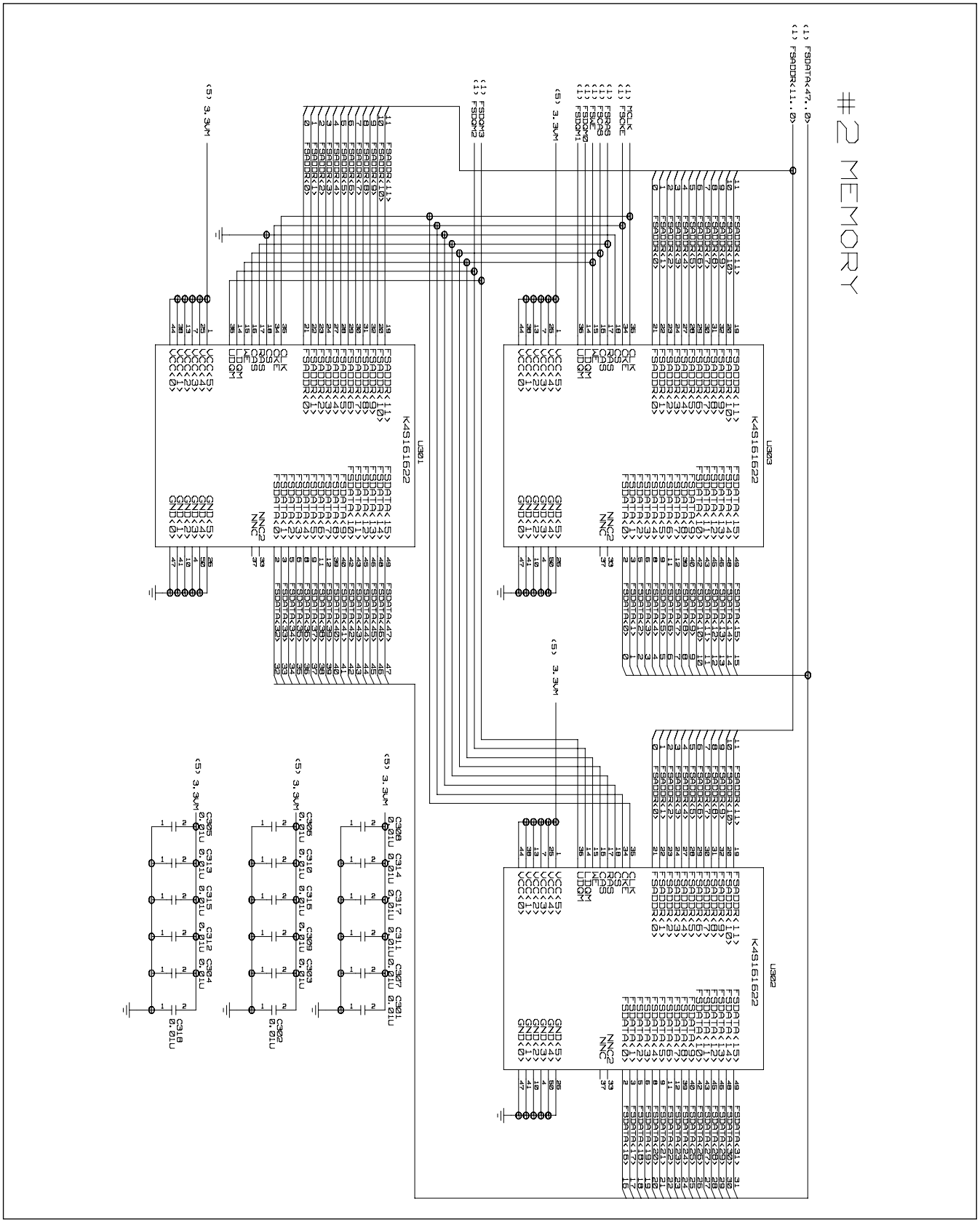


SCHEMATIC DIAGRAM

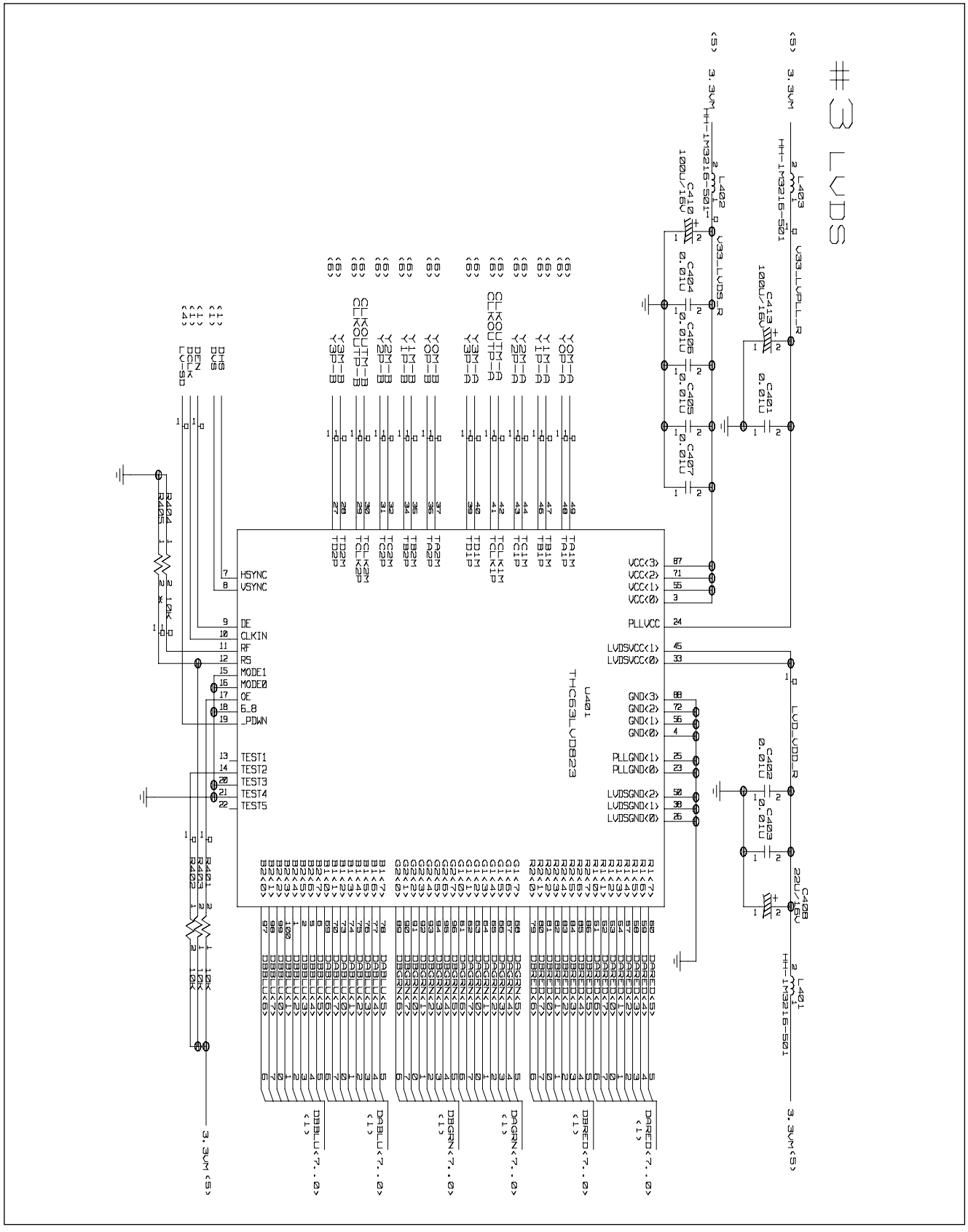
1. GM5020



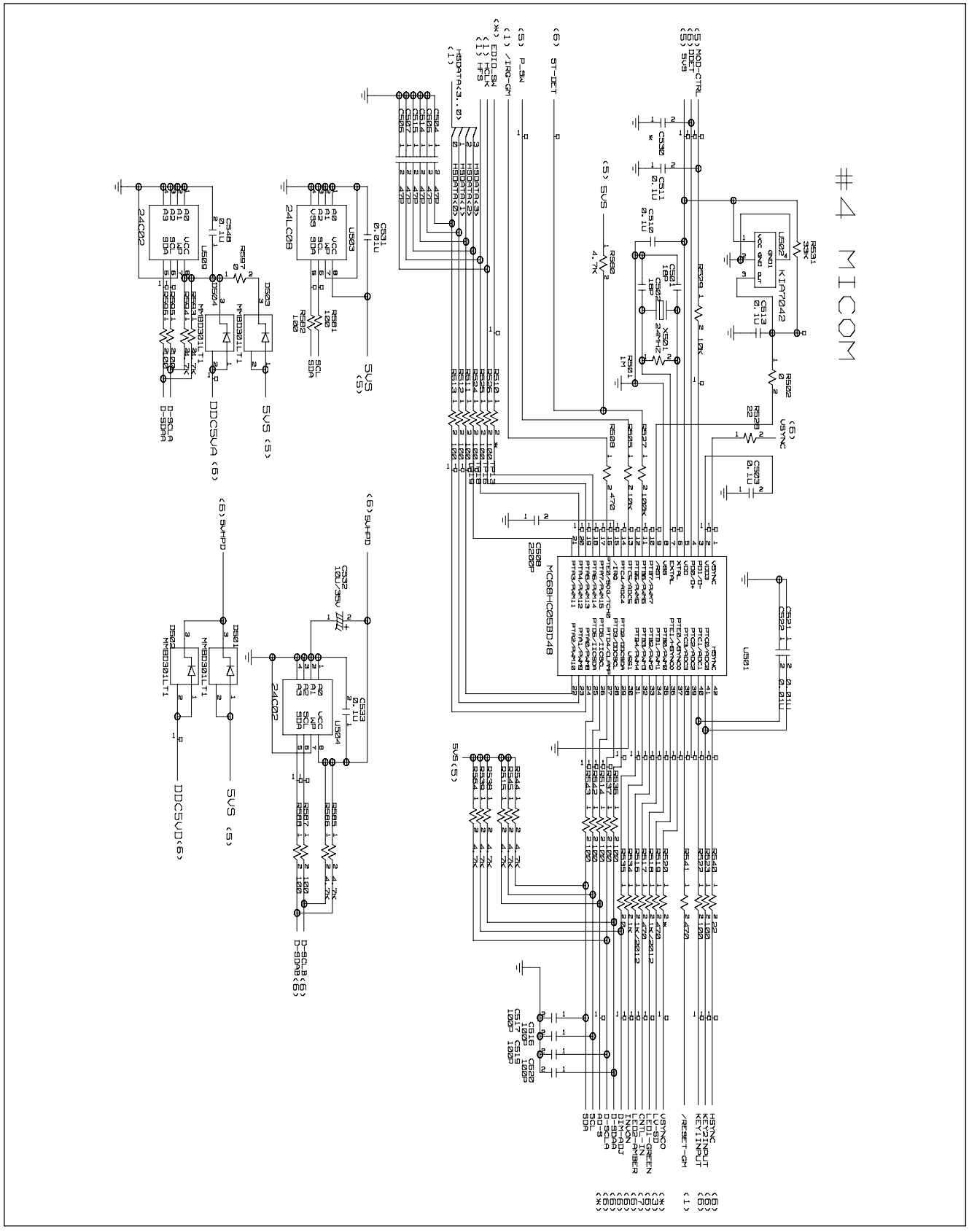
2. MEMORY



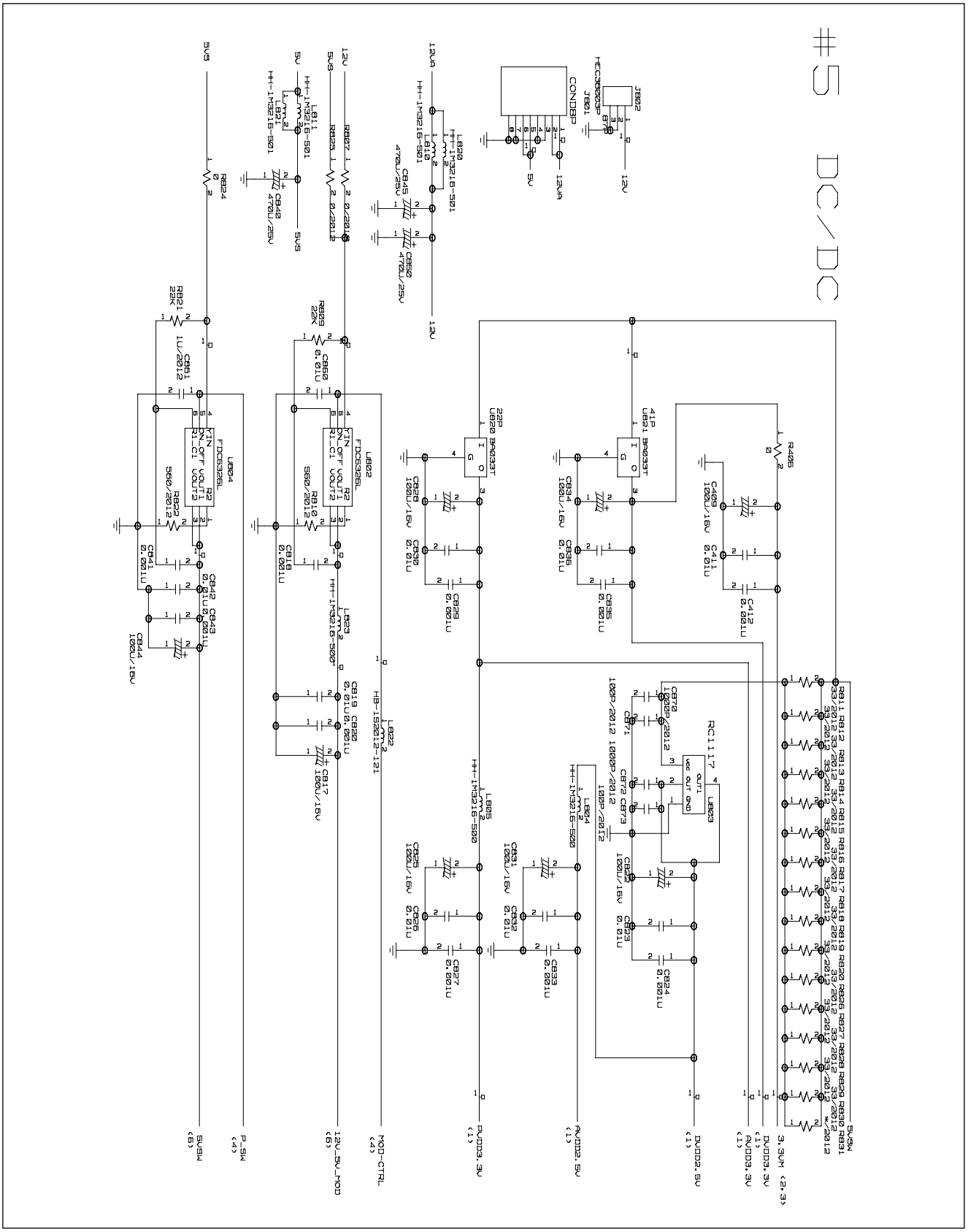
3. LVDS


#3 LVDS
THC63LVD823
U401
L401
L402
L403
C401
C402
C403
C404
C405
C406
C407
C408
C409
C410
C411
C412
C413
R401
R402
R403
R404
R405
LVD_VDD_R
V33_LVDS_R
V33_LVPLL_R
3.3VM
3.3VM<5>
PLLVCC
VCC<3>
VCC<2>
VCC<1>
VCC<0>
LVDSVCC<1>
LVDSVCC<0>
PLLGND<1>
PLLGND<0>
LVDSGND<2>
LVDSGND<1>
LVDSGND<0>
GND<3>
GND<2>
GND<1>
GND<0>
HSYNC
VSYNC
DE
CLKIN
RF
RS
MODE1
MODE0
OE
6_8
_PDWN
TEST1
TEST2
TEST3
TEST4
TEST5
DHS
DVS
DEN
LVDSD
DAGRN<7..0>
DABLU<7..0>
DARED<7..0>
DBGRN<7..0>
DBBLU<7..0>
DBRED<7..0>

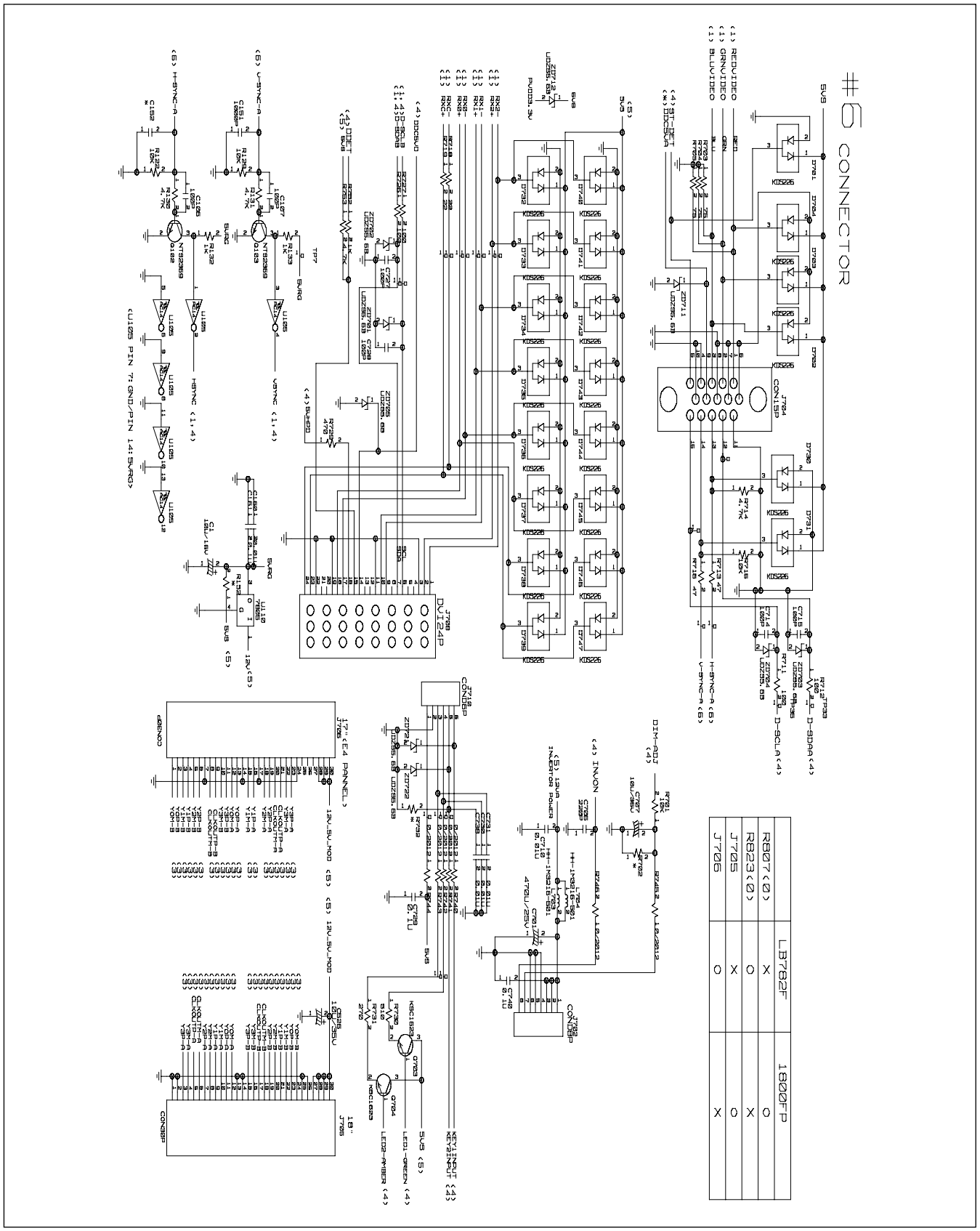
4. MICOM


#4 MICOM
MC68HC05SD48
KIA7042
24C02
24LC08
DDCSVA (6)
DDCSVD(6)
SVS (5)
D-SCLA
D-SDAA
D-SCLB(6)
D-SDAB(6)
SCL
SDA
VSYNC
/RESET-GM

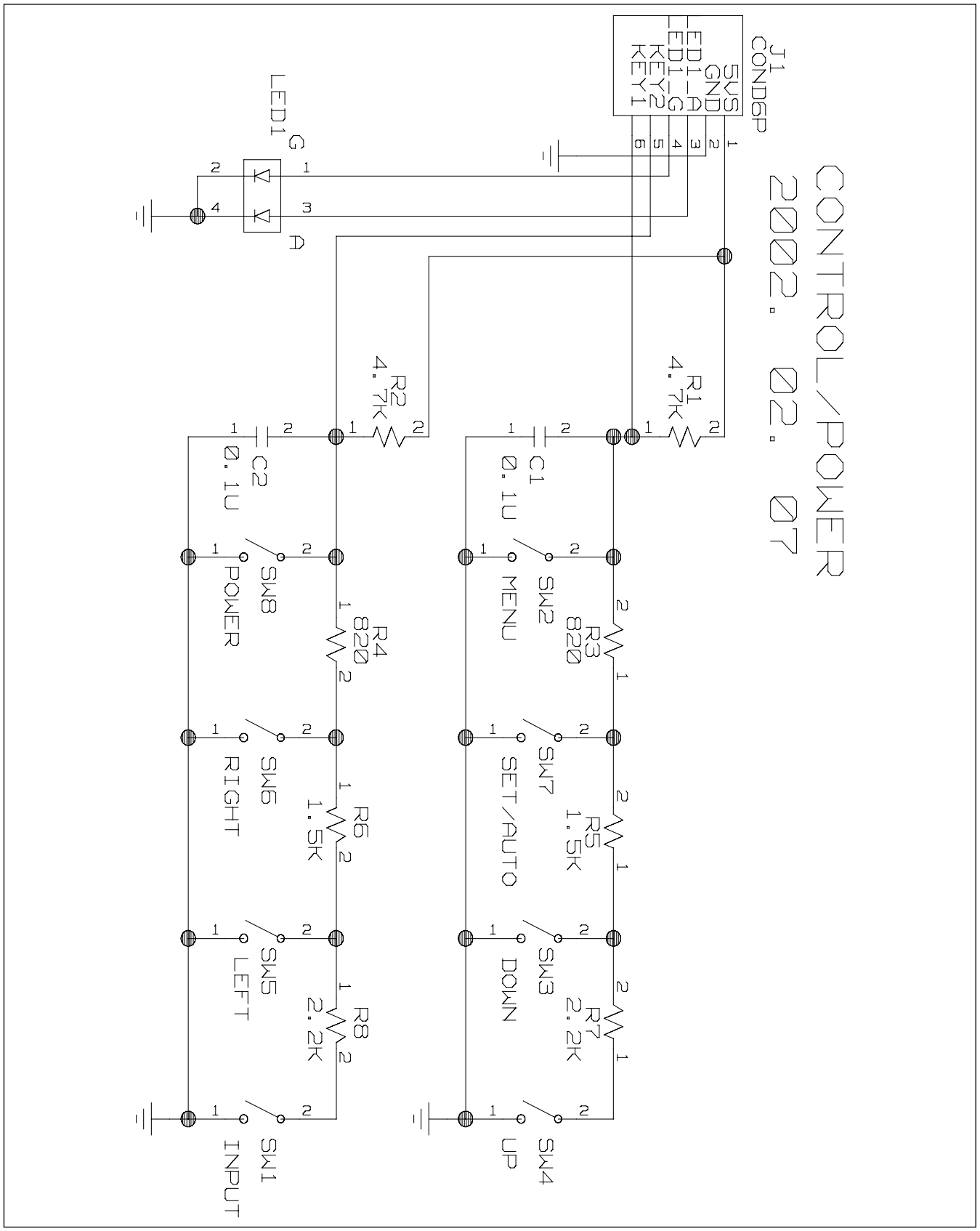
5. DC/DC



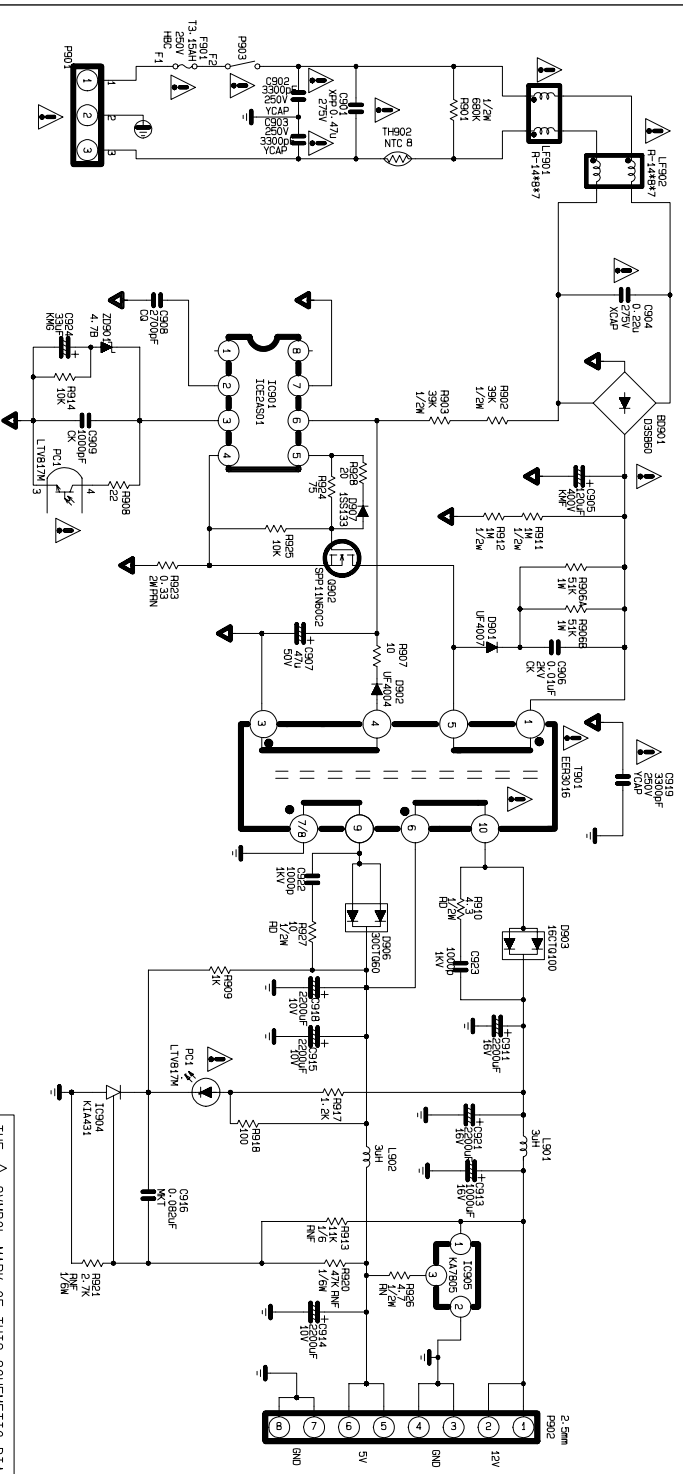
6. CONNECTOR


#6 CONNECTOR
LB7862F
1802FP
R807<0>
R823<0>
J705
X
O
O
X
O
X
O
X
5VS
12V_5V_MOD
KEYINPUT
LED1_GREEN
LED2_AMBER
D-SCLA
D-SDAA
H-SYNC-A
V-SYNC-A
INVON
DIM-ADJ
CONN15P
CONN8P
CONN24P
17" PANNEL
18" PANNEL

7. CONTROL KEY



8. POWER



LD803H Internal Power Circuit

THE ⚠ SYMBOL MARK OF THIS SCHEMETIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION. FILRE AND ELECTRICAL SHOCK HAZARDS. WHEN SERVICING IT IS ESSENTIAL THAT ONLY MANUFATURES SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE ⚠ SYMBOL MARK OF THE SCHEMETIC.

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